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FIFTEENTH INTERNATIONAL SEAPOWER SYMPOSIUM

Report of the Proceedings
7-10 November 1999



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Editor's Note

The editors have made every attempt to establish a clear and accurate record of the Symposium proceedings, one that faithfully records the opinions and view of the participants. In establishing the printed text from speaking notes, transcripts, computer presentations and tape recordings of speakers or English- language translators, the editor has silently corrected slips of grammar, spelling and wording.

The editors acknowledge the excellent work of Mr. Jerry Lenihan, Ms. Melissa Garcia, Mr. Samuel Johnson and the other staff members of the Naval War College Desktop Publishing Department who put our edited work into publishable form.

AWB

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Administrative Remarks

Rear Admiral Ken Heimgartner

*Director, Political Military Affairs
United States Navy*

Captain Soderholm:

Good morning. Admiral Johnson, distinguished delegates, my name is Captain Karl Soderholm. [Administrative remarks deleted.] At this time it is my pleasure to introduce our Master of Ceremonies, Rear Admiral Ken Heimgartner.

Admiral Heimgartner:

Admiral Johnson, Distinguished Delegates, observers and Members of the Naval War College, good morning and welcome to the Fifteenth International Seapower Symposium.

Before I introduce our first speaker, I would like to briefly cover some administrative procedures. First I would like to review the Symposium schedule, concentrating on today's activities. Today there will be two major addresses: the keynote address by Admiral Johnson, followed by an address on Coalition Operations by Vice Admiral Moore. Before breaking for lunch, Vice Admiral Cebrowski will provide an introduction to this afternoon's seminar war game on coalition rules of engagement. As we break for lunch, we will gather for a group picture which will be taken on Colbert Plaza outside the auditorium lobby. During the afternoon we will have the first part of this Seminar war game.

There will be appropriate opportunities after some of the presentations throughout our Symposium to address questions to the speakers and panel members. If you wish to ask a question, please proceed to the microphones in the aisles and you will be recognized. Identify yourself and your country if you would, please. I ask that you speak slowly. All dialogue is being translated and recorded for our Report of Proceedings. Your identification will be most helpful during the transcription process.

Within your booklets are the biographies of our distinguished speakers. Therefore, in the interest of time, I will make my introductions brief. To start our proceedings, I would like to introduce Vice Admiral Art Cebrowski, President of the Naval War College and the local host for this event. Vice Admiral Cebrowski has an extensive operational background. He has commanded a fighter squadron, a carrier air wing, a big deck amphibious ship, an aircraft carrier and a carrier battle group. He served in combat in Vietnam and the Arabian Gulf and deployed in support of United Nations operations in Iraq, Somalia, and Bosnia. He is the forty-seventh President of the Naval War College and has held this post since July of 1998. He is one of the Navy's foremost innovators and a man who has reinvigorated the sense of creativity at the Naval War College. Admiral Cebrowski.

Welcoming Remarks

Vice Admiral Arthur K. Cebrowski

President, U.S. Naval War College

Vice Admiral Cebrowski:

Thank you, Ken. Distinguished guests, good morning and welcome to the Fifteenth International Seapower Symposium. The Naval War College is honored to host this Symposium, the largest gathering of senior naval leaders anywhere in the world. In our audience this morning are representatives from over seventy nations and many Chiefs of Naval Services. I know that many of you came here traveling a very long distance, and you came at some considerable inconvenience and self-sacrifice. I appreciate that very much. I would also like to thank my colleagues in the United States Navy. The Flag Officers, of course, have their own busy schedules and have also traveled a great distance to be here. You add a great deal to our proceedings. Thank you.

There is probably no better location to hold such a gathering than this College. Since its founding in 1884, this institution has served as a crossroads for great naval thinkers and strategists from around the world. Officers representing friendly navies have participated over the years with our faculty as students and in war games. We have always believed that a good idea has no nationality. And this College has always been more interested in the quality of the idea than the uniform of the speaker. This will be very much the case throughout the next two and one-half days. Whether you come from a large navy or a small coast guard, your ideas have value. And I hope you will offer them without hesitation in this auditorium and in your seminars.

Since this is the Fifteenth International Seapower Symposium, some of you have probably attended an earlier one. You will find this Symposium to be significantly different from those held in the past. Of course, there are reasons for that. Some have to do with the changes we have seen and will continue to see in the world's political and economic environments. At the first Symposium in 1969, most of the nations of the world were aligned with one of two superpowers. And this bipolar orientation shaped a great deal of each navy's structure, training, and tactics. There were many very intelligent officers at that first Symposium, but I guarantee that none could have predicted the world we see today. So the ISS has changed because the world has changed.

Our different approach this year also reflects the changes which have occurred in technology. The reach and sensitivity of sensors, for example, the great leap in information collection and dissemination, and the recognition of the threat of information warfare—that is, warfare in the information domain—have changed virtually every aspect of how we do our job in the maritime environment. These

technological changes will force changes in the character of war itself and will demand that we acknowledge new rules, new doctrine, and new tactics. We will look at these issues in some depth over the next few days.

Finally, a reason that this ISS will be different is that this College is different. The overall mission of this marvelous institution has been fundamentally changed while still retaining the very best of what we have always done. The schedule that you have will unfortunately not allow you the opportunity to interface with our wonderful student body. Over five hundred strong, these students from all United States military services, from civilian agencies, and from forty nations are the main battery of this College. They spend only ten months with us, but in that time we help them improve their ability to analyze and conceptualize solutions to complex problems.

In addition to this awesome challenge, we have directed the College to place increased emphasis on research and gaming, and we have added a totally new facet to our endeavors; concept development, fleet experimentation, and doctrine formulation. These new functions are now managed by a new organization known as the Navy Warfare Development Command. This Command was created by Admiral Johnson less than eighteen months ago. When we began planning for this event, we decided to take advantage of our growing research and gaming capabilities and offer them to our ISS delegates in the form of an opportunity to participate in a seminar-type war game focusing on rules of engagement. I'm excited about the possibilities offered by this approach. You will hear more about how this process will operate later this morning.

I hope in the next few days to have the opportunity to speak with many of you on a one-on-one basis. After all, we have much in common even though we serve nations that may be thousands of miles apart geographically and perhaps even culturally. First among the common factors is our respect for the sea and the people who go to sea. In the new century, we will continue to be linked by commerce and communications, and no nation can survive isolated from its global neighbors. I think that most of us would agree that a global view is a maritime view. It's up to the navies and the coast guards of the world to ensure that the seas remain open as highways of commerce and transportation. Our ability to understand and to work with one another at sea is critical to world stability and peace in the coming decades.

I hope the friendships and interpersonal relationships that are developed and enhanced during this Symposium will continue long after you leave these rocky New England coasts. I'm honored to have each of you aboard. I'm pleased that the Naval War College is selected to host this special event. And now, I'm honored to introduce to you our sponsor and the guiding force behind the Fifteenth International Seapower Symposium—a man known to many of you personally, and very well indeed, so a lengthy introduction is not required. I'd like to introduce the United States Navy's Chief of Naval Operations, Admiral Jay Johnson. Admiral Johnson.

Keynote Address: Maritime Strategies for a Naval Century

Admiral Jay L. Johnson, USN

Chief of Naval Operations

Remarks as prepared for delivery

Thank you, Art (VADM Cebrowski) for that introduction and for the great work you and your staff have done to make this Fifteenth International Seapower Symposium a reality. It is truly an honor for me to stand before this distinguished group of colleagues.

I am particularly pleased that so many of you could join us today. The presence of 47 chiefs of service here—including, for the first time, our Commandant of the Coast Guard, Admiral Jim Loy—along with the representatives of 73 nations pleases me greatly and portends a most meaningful symposium. Making the journey here to meet together and share ideas demonstrates not only the depth of your personal commitment to our profession, but also the relevance of our profession to peace, stability, and prosperity in the world of the 21st century.

By the way, as we celebrate this 15th ISS, it is worth remembering that Admiral Richard Colbert began it here in 1969. As a captain, Admiral Colbert was the first director of the Naval Command College. When he returned ten years later as president of the War College, he instituted the ISS to capitalize on the leadership and diverse perspectives he saw in the representatives of other navies at the Naval Command College. His instincts were correct. We have 27 graduates of the Naval Command College and Naval Staff College representing their navies and their nations here today. Welcome back, gentlemen!

I would like to say a few words about the organization of this year's Symposium. During the next two and one-half days there will be opportunities for reflection and discussion on the many changes occurring in our profession. Through panel discussions we will explore the interaction of our navies with the economic, security, and strategic issues which will shape the maritime environment in the coming years. Since we expect coalitions to play an increasingly important role in international security, our speakers will discuss how innovations in warfare and changes in the security environment will influence the strength and cohesion of these coalitions.

One factor that directly impacts our ability to bring forces together in coalitions is rules of engagement. Our Arabian Gulf Fifth Fleet commander, Vice Admiral Willy Moore, will discuss coalition rules of engagement in our next presentation. This is an important issue, one so central to our future interoperability that we have structured a scenario-based war game in order that we may address it more fully.

This shift toward coalition operations, to be effective, demands the greatest possible degree of transparency in our operations. At the navy-to-navy level we should focus on issues which will facilitate the consensus building so critical to a coalition's cohesion. To succeed, we must all know more about the unique perspectives and capabilities each of us brings to a coalition.

To that point, I want to talk with you about the work we are doing to develop what we call, "A Maritime Strategy for the Naval Century." I want to share with you the developing vision of our strategy for the 21st century, and also discuss how coalitions will play a role in the realization of this strategy.

The first question the title poses is, "Why a naval century?" Over the past fifty years we have seen naval forces provide a relatively unencumbered and self-sustaining presence to our national decisionmakers that other services cannot. For the U.S., and for many of you, the inherent flexibility of naval forces has translated directly into an increased operational tempo. Today the requirements for United States' Naval forces exceed the numbers. On any given day, one half of our navy is underway and a third is forward deployed. Moreover, even as we have reduced the size of the Navy by forty percent in the last decade, the number of operational taskings has consistently increased.

Another reason this will be a naval century is the continued development of global economic interdependence. Today's world economy is a global market with 90 percent of the world's trade traveling by the seas. Current predictions are that international shipping will continue to increase, with container tonnage doubling by 2010, despite the greater speed afforded by air and land transport. This growing maritime commerce requires continued and unfettered access to the seas—both on the high seas and in the littorals—the kind of assured access only naval forces can provide.

But this is also the dawn of a new millennium—one which will be dramatically shaped by the current revolution in information technology. We are witnessing explosive growth in the internet and in its application to our day-to-day lives. The power of networking has revolutionized communications, banking, and commercial transactions, and it portends great changes in how we will operate as naval forces in the future.

Another new reality of the coming century is the necessity of coalition warfare. There are simply too many contingencies in this global arena for any nation to be able to adequately respond unilaterally. The cultural, demographic, and regional issues alone are too much for one nation to be able to master. We all need the intellectual strength and geographic expertise that diverse coalition memberships provide. It is in the very diversity of experience that we find one of the key strengths of coalitions.

Rules of engagement are some of the more difficult aspects of coalition operations. To address that, we have prepared a dynamic seminar war game focusing on coalition rules of engagement. As we look at the record of the past decade alone, we feel certain that in the next ten years many of our navies will be called to serve together in coalitions. Our work in this Symposium can lay the keel for better working relationships in the future.

Vision

Having described some of the reasons why the 21st century will be a naval century and some of the emerging realities that will characterize it, I would now like to share the vision of the United States Navy.

First, ours will be a Navy which can "directly and decisively influence events ashore—anytime, anywhere." This would have been a revolutionary statement only a few years ago. Naval forces for most of the 18th, 19th, and 20th centuries have only been able to indirectly influence events ashore. Whether precluding maritime commerce, conducting amphibious landings on suitable beaches, or launching air strikes across those beaches, naval forces have possessed neither the reach nor the coordination to directly and decisively influence events inland. We will do so in the next century.

Second, it is critically important that we take advantage of the tremendous opportunities presented by the technology of what is now being called the information age. Even as many of us work to recapitalize our fleets while operating in a fiscally constrained environment, it is necessary that we build into our future forces the ability to use information networks. We must leverage the business world and optimize these networks to provide the rich benefits they can bring to naval forces.

Third, ours will be a Navy that provides information instantaneously to coalition forces. We see a future where naval forces will share information over an affordable, secure maritime network. Coalitions will use networks to build a knowledge base made available to all naval forces. The knowledge base can then be used to create and share operational plans, and maintain a common tactical picture of the battle.

Once these future naval coalitions have devised their operational plans, they will then use modern communications to coordinate their warfare efforts across the disciplines of surface, submarine, air, and amphibious warfare. They will use this coordination to bring combined, powerful forces to bear at the best place at the right moment, creating rapid and overwhelming victory.

Future coalition forces will also use modern techniques to coordinate the arrival of logistics supplies where and when they are needed, preventing the need for large, vulnerable bases on or near an adversary's shore, and the additional security personnel required. By coordinating logistics from ships at sea, these coalitions will free landing forces to bring all their combat power to bear on the objective ashore.

Capstone Concept

Embedded in this vision is the answer to the question of how such a force will operate; what we describe as our "capstone operational concept." We call this concept "network-centric operations." It is the means by which we will harness the incredible and ever-growing power of the information age. In times of war, network-centric operations become network-centric warfare. Many of you have heard me talk about this, and much has been written about it. It is a reality today even as we are just beginning to understand its implications.

Network-centric operations as a capstone concept has four supporting concepts which also flow from the vision I have outlined above. The first of these is called

"information and knowledge superiority." This is how we will create an information and knowledge advantage relative to potential enemies.

It means that we must have a force which is capable of fighting first for superiority in this realm of conflict. It includes the ability to maneuver sensors at the tactical level and share their products. It means having high quality information processing and display capability and decision aids, and, most important, the means to protect them while at the same time being able to attack an enemy's information capability. The challenges and the powerful opportunities for coalitions are clear. This is an area where we must work together.

The second supporting concept is called "assured access." To achieve the vision of direct and decisive effects—anytime, anywhere—we must have access to the domains of conflict—anytime, anywhere. Accordingly, we must have forces which are configured and trained for the mission of gaining access. Every potential enemy must know that the United States Navy and its coalition partners have access from over the blue water horizon to the beach and beyond—that there is no sanctuary for the enemy.

The third supporting concept is called "speed of effects." In this increasingly globalized world the consequences of even a brief aggression can be severe and long lasting. Current measures of deterrence may prove inadequate. This indicates the ability to respond from a forward posture to stop something before it can start, to alter initial conditions in ways which negate enemy options, and prevent an enemy from using his preferred strategy. Navies must work together not merely to manage consequences but to prevent them.

The fourth supporting concept is called "sea basing." This concept recognizes the freedoms and advantages of operating from the sea. The sea is essentially a borderless domain where navies have great freedom of action, where there are not the same legal constraints as on land and in the air over land. In this concept, total warfighting capability is based at sea. This includes the ability to sense targets and activities from the sea and the ability to project defense from the sea to cover and support coalition partners ashore. This concept considers the growing sense of sovereignty even in this time of increased globalization.

This is our vision. We are going to do this. It is indeed a challenge, but it is an attainable future.

Here and Now

Yet even as we discuss the navy of the 21st century, here and now we still have practical issues to deal with together.

Technical Interoperability

Even as we are moving toward the future and we are working to gain advantages from the many advances of the information age, alternate technologies may arrive which alter our vision. But we must never lose sight of technical interoperability.

It should be our goal to create a common standard which enables each of us to field naval forces which may be brought together in coalitions and will be able to operate and communicate with one another. We remain committed to leveraging

the commercial technology available today to create affordable, secure coalition networks at sea which will enable our forces to work together as partners.

Operational Interoperability

The same financial limitations which challenge our recapitalization efforts also directly impact our ability to operate and maintain the forces we have. Yet the tremendous importance of working together at sea, and the valuable intellectual and personal capital that it provides our junior officers and enlisted personnel cannot be overstated. We owe it to them to make every attempt to support continued and, when feasible, expanded opportunities for our naval forces to operate together.

One need only look at the size and breadth of the coalition gathered during Operation Desert Storm to see the rich benefits of training together on a regular basis. The exercises which preceded the crisis had provided a common base of knowledge and experience which dramatically enhanced the cohesion and cooperation of the coalition.

I would also suggest that the size of the exercise is not as important as the underlying commitment to future interoperability that it represents. Such exercises build confidence in each other's abilities too. Knowing each other in the operational environment provides an aspect of interoperability that cannot be obtained any other way.

Each of our navies and coast guards is of equal importance to a coalition. So the willingness of international navies to work together in single ship exercises while transiting from port to port can be just as important as the more sophisticated bilateral and multilateral exercises. Regardless of the technological compatibility or sophistication of our navies or coast guards, it is the people that are the most important part. And they will make our future coalitions successful.

Political/Legal Interoperability

Over the last fifty years, the key interoperability challenge to coalitions has not been technical and it has not been operational; it has been political and legal. Even as today's world becomes more globalized, many of our governments are, in fact, even more sensitive to issues of sovereignty than they were in the past. And issues of sovereignty will be ever more important in the next century as nations seek to appear distinct even as our world becomes more and more interconnected and interdependent.

The instantaneous communications and computer links that characterize this information age have also signaled the end of an era where regional instabilities were only felt locally. The speed with which information travels across the earth has created an expectation for a similar speed of action. Because naval forces are often the only ones often available to respond to a crisis, it will be imperative that those forces which come together in coalitions be able to clearly and distinctly articulate the limits placed upon them by their national policies. Such realities must be factored into the coalition's operations.

These three areas—technical, operational, and policy interoperability—represent opportunities for us to improve our abilities to achieve consensus and to build cohesive naval coalitions in the coming years. As we review our past history of

interoperability, we recognize that we have been united in coalitions under many mandates, but the desired outcome is usually to achieve one of four ends.

First, we seek regional stability. Coalition naval engagement develops critical partnerships, enhances interoperability between allies, and lays the groundwork for working with future coalition air, sea, and ground forces.

Second, we seek to deter aggression and to promote stability and prosperity. Naval forces, working alone or in coalitions, provide civilian leadership another dimension in their international relations. Naval forces reassure allies and provide sustainable and scalable combat presence across the operational spectrum—from humanitarian response to armed conflict.

Third, operating from the sea, naval forces are unencumbered and able to provide timely crisis response. Naval forces possess the endurance to remain on station. There simply is no substitute for being there.

Fourth, the most elemental responsibility of naval forces—either alone or in coalitions—is to deter war. If that fails, we can enable the smooth and rapid transition from crisis to conflict. Importantly, following crisis resolution, self-sustaining naval forces possess the endurance to remain on station and manage the transition back to peace and stability. Coalition naval forces are the forward presence force, on station before, during, and after a crisis.

In order to achieve these four ends, we feel that the capability for early, sustained response with combat-credible naval forces requires that they be forward deployed, configured to handle contingencies across the spectrum of operations, and prepared to operate in a joint and coalition environment.

Neither the United States Navy nor any other navy or coast guard should do this alone. Coalitions, as we have seen over the last fifty years, enable each of our navies to provide unique capabilities that can play an important complementary role in support of the coalition's military objectives.

Today we face far different threats than during the Cold War. While my Navy remains capable of meeting the operational requirements of fighting and winning two nearly simultaneous major theater wars, our force is sized and shaped to support daily forward presence. At the same time, small-scale contingencies of varying size and intensity demand increasingly effective and flexible forces that can be tailored to support peacetime diplomacy and crisis-response operations in key world regions, including humanitarian operations. We seek the support of coalitions composed of allies and friends in operations where we can work toward common goals.

This Symposium's primary purpose is to promote international engagement at the highest level of naval leadership. Time and again our navies have served to facilitate both diplomatic discussions between our countries and political solutions to difficult problems. By strengthening our personal and professional bonds here this week, and by working to understand each other's diverse perspectives, we foster improved relations between our navies—and that will pay huge dividends in future exercises and operations.

By building relationships of deeper trust and confidence with each other, and by increasing mutual understanding and transparency of operations, we lay the groundwork for improving future coalitions. More importantly, we better prepare

ourselves to deal with both the challenges and opportunities that this exciting naval century will bring.

I thank you again for your attention, and hope that this symposium will fuel serious discussions and enhanced cooperation between us. I look forward to sharing the coming days with you.

-USN-

Coalition Operations

Vice Admiral Charles W. Moore, Jr.

*Commander, U.S. Naval Forces Central Command;
Commander U.S. Fifth Fleet,
United States Navy*

Rear Admiral Heimgartner:

It is now my honor to introduce Vice Admiral Moore. Admiral Moore is qualified as both a Naval Aviator and a Surface Warfare Officer and served in combat in Vietnam and Libya. He commanded a fighter/attack squadron, a carrier air wing and a carrier battle group and currently serves as both the Commander of U.S. Naval Forces Central Command and Commander U.S. Fifth Fleet. He is one of the foremost experts within the United States Navy on coalition operations. Admiral Moore.

Vice Admiral Moore:

Thank you, Ken, for that kind introduction. I want to tell all of you that it is a real honor for me to be here at this Fifteenth International Seapower Symposium. I am particularly delighted to be here with so many of my friends from overseas that I have had the opportunity to work with in the past. It is great to see all of you gentlemen. I have had two back-to-back tours overseas and always look for opportunities to return to the United States and reacquaint myself with my colleagues in the United States Navy. So it is great to be here for this ISS.

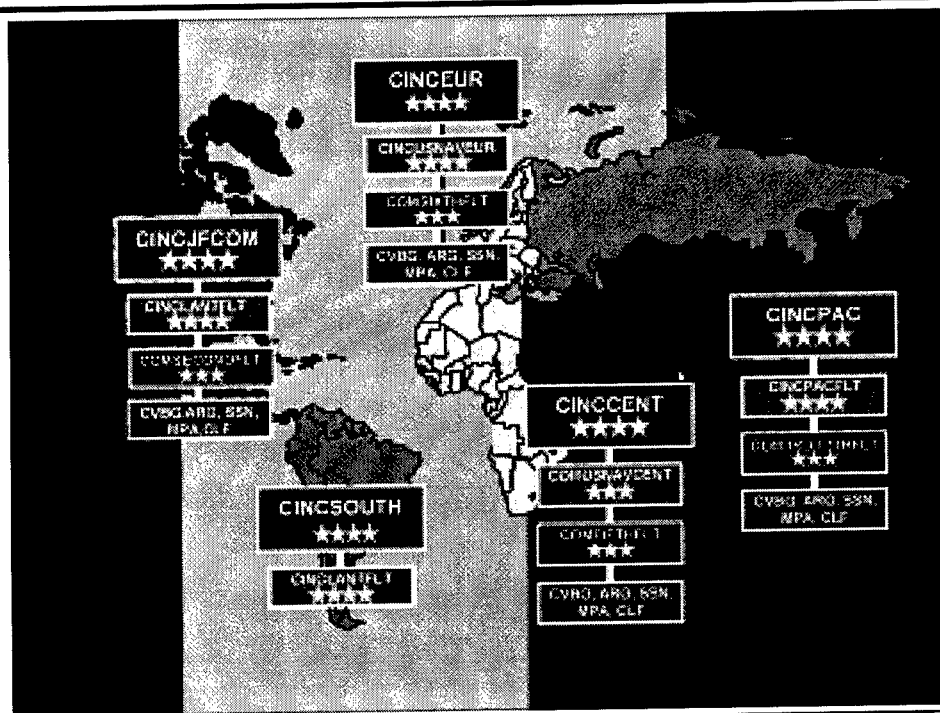
I normally would not look for opportunities to follow the CNO, since he always gives such great speeches and is a tough act to follow. But today I am excited about it, because the CNO has done a great job in giving us a nice strategic overview and lead-in to my presentation that will be an operational discussion of coalition operations. I come to you not as a strategy and policy professor, and I do not work at a think tank. I am a forward deployed operational commander, and I deal with coalition operations every single day—that is my experience. I hope I will be able to share some of these experiences with you, so that you may gain some insight into this very important issue that we are discussing here at the Fifteenth International Seapower Symposium.

Before I begin the substance of my presentation, let me briefly summarize what we are going to talk about. A thought struck me that many of you may not know what COMUSNAVCENT and COMFIFTHFLT are all about. Where are we? How do we fit into the grand scheme? So I will take a couple minutes and level the playing field with you on that issue. Then, before we get into coalition operations discussions, we ought to have a common definition of the term, so we will spend a little time on that subject. Following that, I will offer two real-world examples of

coalition operations; the first, maritime interception operations, which are on the low end of the conflict spectrum, but are very important operations; and second, we will talk a little bit about a recently concluded exercise in Egypt called Bright Star 99, which was an exercise based on a hypothetical major theater war and would be on the high end of the spectrum. These two examples hopefully will bring out the points that the CNO mentioned in his speech. After a brief conclusion, I will be happy to take your questions.

I think most of you are familiar with our Unified Command Plan and how the United States military organizes around the world—how we are organized to fight around the world. Figure 1 portrays our geographic CINCs: Commander in Chief Pacific Command, our CINC that controls the largest area; European Command; Joint Forces Command; Southern Command; and Central Command, commanded by General Zinni. All of these CINCs have Naval Component Commanders. As you can see, in Pacific Command it is CINCPACFLT, and in Central Command it is COMUSNAVCENT—and I hold that position. All of these Naval Component Commanders have a numbered Fleet Commander that works for them—you see Third and Seventh Fleet, Sixth Fleet, Second Fleet. In the Central Command area we have the Fifth Fleet. The funny thing is, I hold both of those jobs, so I have the great honor and privilege of working for myself. Anybody notice that this is a

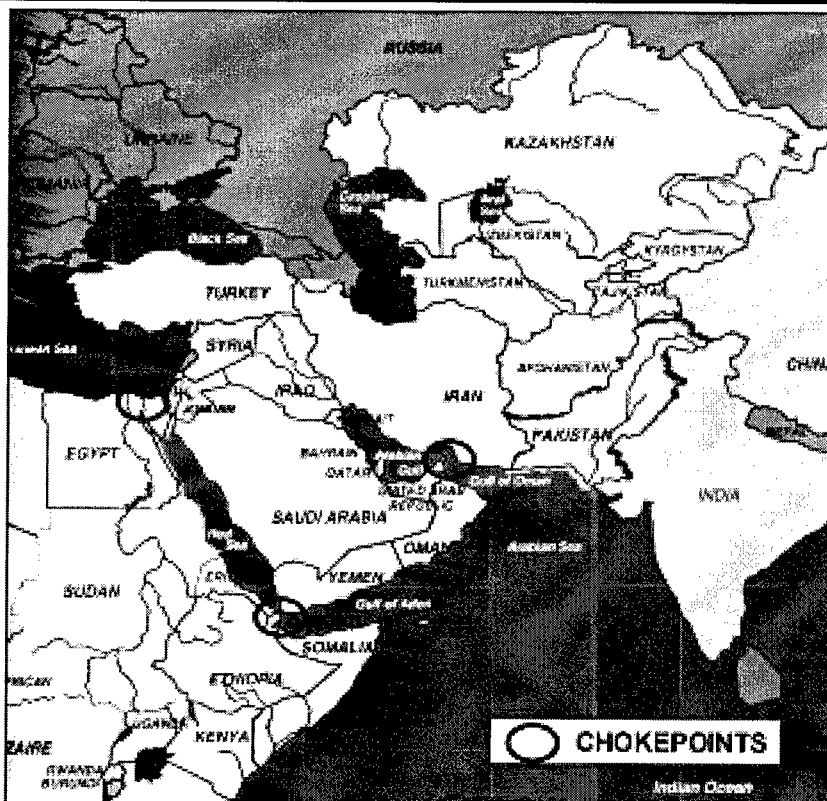
Figure 1. Unified Command Plan



three-star job? All the rest of these guys are four stars. I have been hoping that the CNO would notice that, but so far he has not bitten on it.

Figure 2 illustrates our area of responsibility. It coincides with the same area that General Zinni controls. It runs from Egypt to the west, down through the Horn of Africa, across the Indian Ocean south of the Seychelles up to the border of India, Pakistan, the Central Asian states, the Arabian Peninsula, and, of course, all the water therein. Pretty significant area, with twenty-five countries. Lots of vital interests at stake in this region, and, of course, three significant chokepoints—as the Maritime Component Commander they are a major concern for me: the Suez Canal, Bab Al Mandeb, and the Strait of Hormuz.

Figure 2. NAVCENT Area of Operations

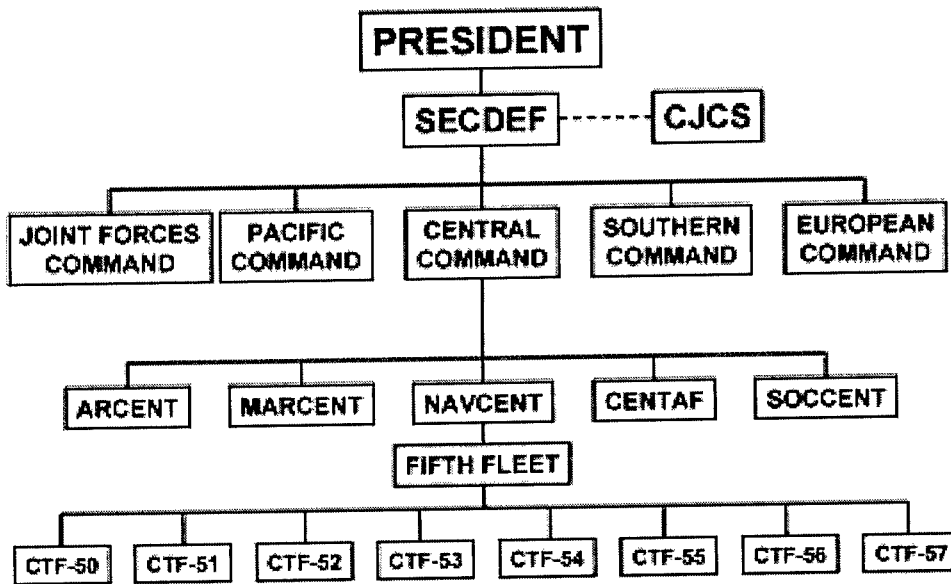


AREA OF OPERATIONS ENCOMPASSES:

- 25 COUNTRIES
- 3 CRITICAL CHOKPOINTS
 - SUEZ CANAL
 - BAB AL MANDEB
 - STRAIT OF HORMUZ

I thought you might be interested in CENTCOM command relationships [Figure 3]. General Zinni has Army, Marine, Air Force, Special Operations, and Navy component commanders. The Navy component commander is also Fifth Fleet. We task-organize our forces into various taskforces to execute whatever missions we have.

Figure 3. Command Relationships



Now after having discussed where I fit into the grand scheme of things, let's move on to our definition of a coalition. We need a common definition, and what better definition to pick than the Naval War College definition, where we are right now. "An arrangement between two or more nations for a limited time to organize the common action against a specific concern that is mutually threatening." Well, I am a naval aviator, so I need to keep things very simple in order to get through all of the issues. I have boiled that down to a definition that I have created.

I say that a coalition is "a political-military commitment to common values"—that is the naval aviator definition. Now, clearly, there are other elements of a coalition—diplomatic, informational, economic, technology transfer—lots of other issues. But in the context of the discussion we are going to have today in this seminar, and frankly in the context of my day-in day-out responsibilities, this is what I think about when I think about a coalition: "Political-military commitment to common values."

Now in the Cold War, as the CNO mentioned, it was pretty easy to put together a coalition; you were in one of two camps. It was a bipolar world. Either you were in the Soviet block or you were in NATO. Some would argue there was a non-aligned group out there, but it was fundamentally a bipolar world—pretty simple. Post Cold War, though, has gotten much more complex. We face a number of threats.

The threat of rogue states. We deal with them every day—Iraq, Iran, North Korea, and maybe Libya. Rogue states pose a significant threat. Transnational threats—the threat of terrorism, something I worry about in my job every single day; drug trafficking; international organized crime; weapons of mass destruction—these transnational threats are serious and affect us all. Failed states—we could say that Haiti back in '94 was a failed state, Bosnia in '95, Kosovo in '98 and '99. Failed states give us a significant problem. The CNO said it best when he said coalitions were important during the Cold War, but they are more vital today than ever before in order to deal with the threats that we face.

What is threatened by these threats? I say that our common values are threatened, and those common values are peace, stability, and prosperity. It is our pursuit of these common values that bring us together. Whether we like it or not, for better or for worse, the globe is getting smaller. We are involved in a global economy. And our only hope for the future is that our global economies can grow and we can grow our way out of these problems. To the extent that we face these threats, our future is threatened. So it is peace, stability, and prosperity that fuel our coalitions. Shown in Figure 4 is a great picture of King Hussein, Prime Minister Rabin, and President Clinton signing the Peace Treaty between Jordan and Israel that took us one giant step forward in our Middle East Peace Process that we are still working hard on today.

Now, the CNO in his speech said, "What are coalitions?" They are really coalitions of people, and that is my perspective. That is what I see in my region. We come together in pursuit of our common values with this commitment to one another; then it is up to people to work these issues out. I thought I would provide

Figure 4. Common Values

• **Peace**

• **Stability**



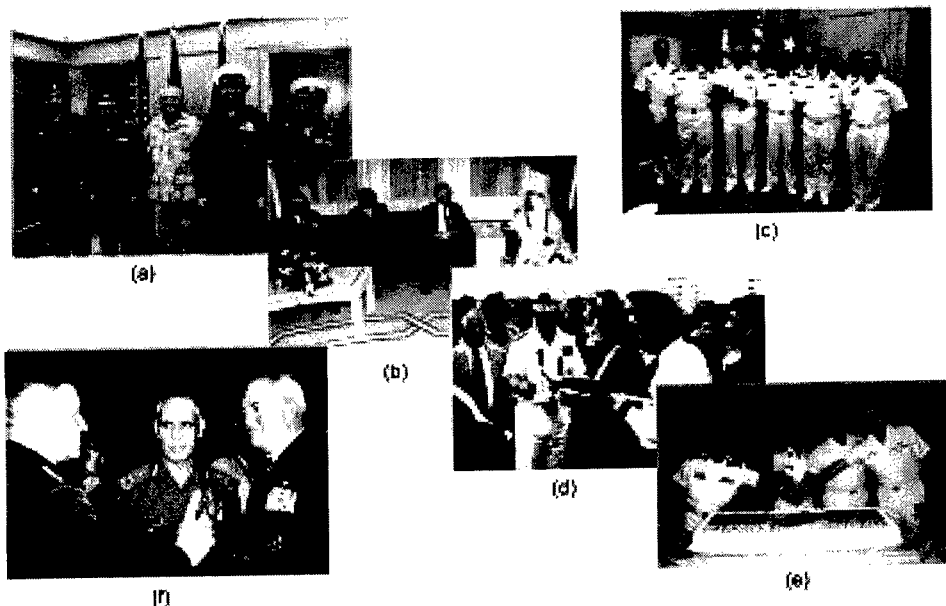
• **Prosperity**

THE FUEL OF COALITIONS

some pictures to give you a flavor of what I am involved in out in my region in terms of building coalition partnerships every single day. On the left in Figure 5(a) is a fine gentleman, Brigadier Ahmed. He is the Commander of the Kuwait Naval Force with some of his staff. We are meeting in my headquarters working out the details of our mine countermeasures plan in the Northern Gulf and our maritime interception operations plans. Figure 5(b) shows our U.S. Ambassador to Bahrain, Johnny Young, Secretary Danzig, and myself talking to the late Amir, Shaihk Isa, about our long-term program for the U.S. Navy's presence in Bahrain. In Figure 5(c) we are with Brigadier Suhail and some of his great men from the UAE Navy at my headquarters during one of our biannual staff talks. We conduct these talks to work out the details of our interoperability, our exercise program, and contingencies where the UAE Navy would be supporting us in a coalition.

Figure 5(d) was taken in Yemen where we cut the ribbon for the Humanitarian De-mining Center. We run the world's largest humanitarian de-mining program out of my headquarters. Also cutting the ribbon in this picture is Dr. Siedi. He is the Minister of State for Cabinet Affairs in Yemen and the gentleman who drives the program for humanitarian de-mining in Yemen. Figure 5(e) is a cake-cutting with the Royal Saudi Eastern Fleet Commander, Rabel Muhammad, and Commodore Fahad. We had just finished our final planning conference for Exercise Red Reef, which we concluded in October, and we cut a cake in honor of the exercise we were about to start. Figure 5(f) is General Zinni, my boss, and General Malkawi. General Malkawi is the Chairman of the Joint Chiefs for Jordan. We took that picture on the 3rd of November during a discussion on our overall engagement program with Jordan when the *USS John F. Kennedy* was in port in Aqaba. There is a fine gentleman

Figure 5. Building Coalition Partnerships



in the audience—Brigadier Hussein, who is the Commander of the Royal Jordanian Navy—he is behind General Zinni—also engaged in the conversation with us.

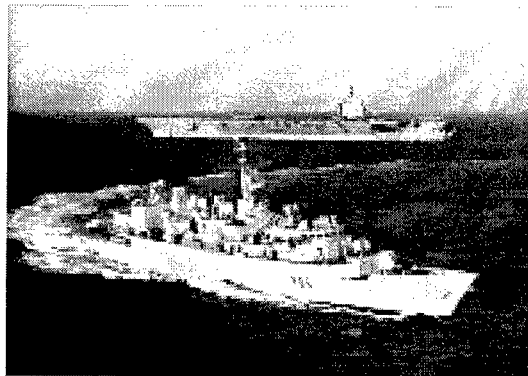
In my view, the biggest challenge in putting together an effective coalition is to integrate diverse mixes of equipment, capability, training, readiness, doctrine, and rules of engagement from multiple nations into a single coherent operation [Figure 6]. Now, over the course of this Symposium, you are going to hear a lot about interoperability. The CNO mentioned it several times in his speech. The question is, what is it? I say that interoperability is just the degree to which we deal with all of these challenges and others.

Figure 6. The Challenge

Integrating Diverse Mixes of:

- Equipment
- Capability
- Training
- Readiness
- Doctrine
- ROE

from multiple nations into a single, coherent operation.



Rules of engagement is one of the challenges, and I am going to talk about rules of engagement a little bit in my presentation. You are going to devote your entire afternoon to a rules of engagement war game, and I would just tell you this at the outset on rules of engagement—for me, as the operational commander and the Maritime Interception Operations Commander—I hear a lot of talk about it. People express concerns about it. But I will tell you, to be honest, it is not that much of a concern to me. I acknowledge the fact that rules of engagement come to us from our political leaders. When a country comes to my area and wants to join our coalition, we just accept the rules of engagement that they bring because we know we are not going to change them. We make accommodations for them. That is the theme that I hope you will see emerge out of this presentation. We have got to make rules of engagement work—and we make it work by sitting down around a table and dealing with it. There are others who would see rules of engagement as a political constraint.

There are many other challenges that are not on the slide. Language is a significant challenge. The CNO mentioned sovereignty, a difficult challenge, command and control, communications, on down the line—a whole list of challenges that we have to work through before we have an effective and cohesive coalition.

How do we meet the challenge? I am not going to give you a recipe or a checklist. What I am going to give you is my philosophy on how to deal with these challenges. There are three elements to my philosophy. The first one is we have to acknowledge that there is a job for everyone in the coalition. I want to dispel any notions

that you have right now that you have to have an aircraft carrier battle group to come into our coalition. We frankly do not care what you have as long as you are committed. If you are committed, there is something for you to do in our coalition. It does not have to be military force. It might just be statements of public support. It might be logistics. Maybe it is financing or access. You will see some of this when we get into the multinational interception operation discussion.

I conduct an annual Maritime Commanders Conference. That conference was just held on the 29th of September, and was attended by the navy chiefs and representatives of navies throughout our region, and many from outside our region. We had the CNO from the New Zealand Navy, representatives from Germany, the Netherlands, from the Royal Navy, and many others. We meet once a year and sit down around a table and decide how to employ the various capabilities that these nations bring to our coalition. It is acknowledging the fact that there is a job for everyone. You have a place in our coalition if you are committed.

The second element of my philosophy is that interoperability is key. Once we make a commitment to come together as a coalition, then we have an obligation to figure out how to make it work and then exercise it. In our area we do fifty exercises a year focused on interoperability. One I am particularly proud of is called Arabian Gauntlet [Figure 7]. There were twelve nations in that exercise. We ran it for the first time last spring, and we will run it again in March 2000. It will be bigger than it was last year. This exercise represents twelve nations who say, "We are concerned about mine countermeasures in the Arabian Gulf. We want to join you in an effort to make sure that the Strait of Hormuz remains open." That is what Arabian Gauntlet is all about. Interoperability is key. It requires work and commitment. There is

Figure 7. Meeting the Challenge

- **There is a job for everyone**
- **Interoperability is key**



nothing magic about it. It is a lot of hard work to make sure that we can bring these coalitions together and operate effectively.

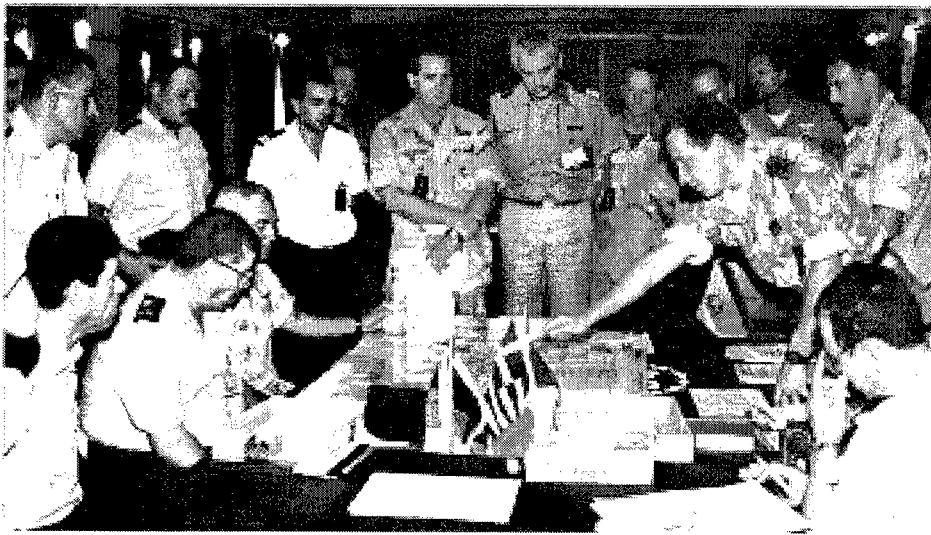
The last element of my philosophy is that warfighters will work it out. The warfighters have to come together and resolve all these issues. We have to sit down around a table, work through the details, and come out with some workable solutions. Shown in Figure 8 is a picture taken from Exercise Bright Star at my maritime component headquarters. Rear Admiral Salah from the Egyptian Navy was my co-commander. Representatives from every nation in the coalition were at this meeting, and we are working through the details of how we are going to execute our maritime operations during Exercise Bright Star.

Now, just to review, the definition of the coalition—Willy Moore's definition is "a political-military commitment to common values," and those common values are peace, stability, and prosperity. We have some challenges to our coalitions, but we know that we can work them out. The elements of our philosophy were what? There is a job for everyone, interoperability is key, and the warfighters are the ones that have to work out the details. Now let me move into some real-world examples—Maritime Interception Operations.

Before we get into the details, I should give you some context for it. The United States Government and our coalition partners in our contingency response to the Iraqi situation have a policy called sustained containment. Sustained containment—there are various elements to that policy. I am going to talk about the military dimension of it. We accomplish sustained containment in three military operations. The first one is enforcement of the no-fly zones. Although I am not

Figure 8. Meeting the Challenge

- **There is a job for everyone**
- **Interoperability is key**
- **Warfighters will work it out**



going to brief you on enforcement of the no-fly zones, I would be happy to answer any questions you might have after our presentation. The second one is the defense of Kuwait. We have significant ground forces in Kuwait, lots of prepositioned equipment, and that constitutes the second element of our containment program. The third is the Multinational Interception Operation (MIO). General Zinni, my boss, argues that the MIO, as we call it, is the most important element of this containment program. Why? Because Saddam uses the sale of illegal gas oil to finance his regime. So every metric ton of gas oil we interdict equals dollars out of Saddam's pocket that do not further his regime and add to the threat that he poses in the region. So that is the context of our MIO. Let me get into the details of it.

Maritime Interception Operations

MIO is a unique coalition—a unique operation that has been in business since 1990. I would argue it is one of the longest sustained coalition operations we have ever conducted and serves as a multilateral venue for cooperation. I do not want to say that we use MIO as a way to exercise and improve interoperability—we do not like to think of a real-world operation as being an exercise. But I am here to tell you that we get a lot of good training, and we get a great opportunity to work through our interoperability issues in the MIO. We have had strong commitment by the Gulf Cooperation Council (GCC). I will show you another slide on that. Each nation in the GCC has supported us exceptionally well. We have a superb record of accomplishment—I will give you some details on that. We are very proud of what we have accomplished in the MIO and proud of our strong continued support from the international community. We have had over a dozen nations outside our region over the years make contributions to our forces in the MIO.

The Maritime Interception Operation is founded in UN Security Council Resolutions shown in Figure 9. You can see that we had a Resolution that established the sanctions in the beginning and one that called for maritime enforcement of the sanctions. We then very quickly realized that there needed to be humanitarian relief for the Iraqi people, and 687 came into being. Subsequently, Resolution 986, which is the oil for food program, was passed, allowing Iraq to sell oil and gain revenue to buy humanitarian assistance for its people. Since production revenue limits or capability was not high enough to produce sufficient oil for the food program, Resolution 1175 authorized repair parts to increase oil production capability to get it to that level.

Figure 9. United Nations Security Council Resolutions

THE FOUNDATION OF THE MIO EFFORT

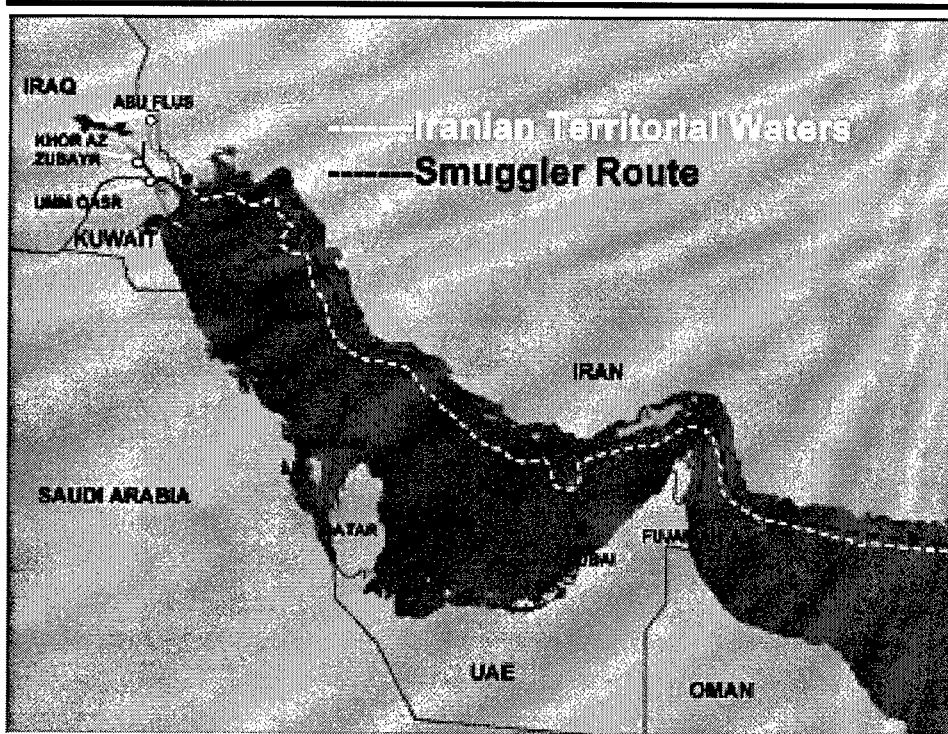
- **661: Prohibits Importing Iraqi Goods and Restricts Exports to Iraq**
 - **665: International Maritime Forces Called On to Verify Compliance with Sanctions**
 - **687: Provided Humanitarian Relief for the Iraqi People**
 - **986: Oil Sales for Humanitarian Relief**
 - Oil for food program
 - **1175 Repair Parts to Increase Oil Production**
-

Those resolutions gave us a mission: intercept all maritime shipping to and from Iraq to enforce the provisions of the United Nations Security Council Resolutions. We intercept all traffic going and coming. We are not only interested in smuggling, we are interested in making sure the 986 program is disciplined and runs as it was designed. So every single oil shipment out and every humanitarian relief shipment in gets inspected by our MIO forces.

I thought I might walk you through what the smugglers do [Figure 10]. The smugglers originate in one of two waterways, the Shatt Al Arab or the Khawr Abd Allah. There are places in the Shatt Al Arab and Khwar Abd Allah where they take on fuel; then they sortie out into the Gulf and make a hard left turn. They stay inside Iranian territorial waters until they have an opportunity to come down to Dubai, go through the Strait of Hormuz, go around Fujairah or other points outside the Gulf. They generally stop at a place called Arvand-1 at the mouth of the Shatt Al Arab and pay a tariff to the Iranians for use of their territorial waters. So our forces have difficulty in intercepting these smugglers. There are a couple of places in the northern Gulf where they cut across the Iranian territorial waters line to save time, and we can interdict them there. Sometimes their navigation is poor and they wander out into the Gulf. Sometimes we will nab them down here enroute to Dubai, in international waters. But it is a difficult and challenging operation to interdict smugglers who have access to territorial waters.

As we speak today, in Abu Flus on the Shatt Al Arab, barges were taking on oil. They then go out into the middle of the waterway and refuel the tankers, and the

Figure 10. Smuggler Operations



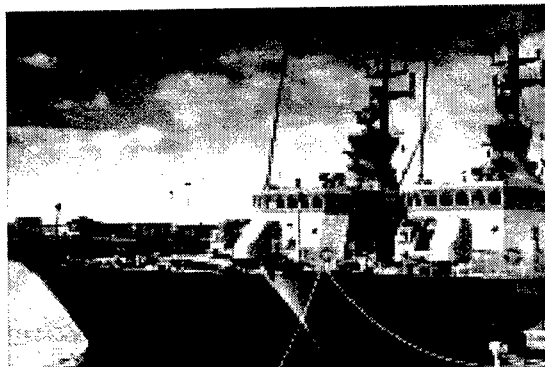
tankers, then move out into the Gulf. This is what is going on today. When I left the Middle East a few days ago, we had thirty-five tankers lined up in the Shatt Al Arab and Khwar Abd Allah ready to sortie out into the Gulf.

What forces do we use to conduct the MIO? Typically four to six frigates, destroyers, and cruisers. Other coalition nation forces are integrated into that basic element in the northern Gulf. We frequently have to operate in shallow water as there is a lot of shallow water in the northern Gulf. So we use patrol boats, special operations craft, and personnel join us in this effort—boarding teams. Of course, it takes significant command and control in communications. Illustrated in Figure 11 is a picture of the brand-new Kuwaiti P37 patrol boats—they have had them only about three months in their inventory. We have already had them out in the MIO joining us in this important operation.

MIO coordination-COMUSNAVCENT/COMFIFTHFLT is designated as a United Nations coordinator of this operation. Why? Because we have some significant command and control capability at my forward headquarters. This gives us the facility and the capability to command and control and coordinate the operation. The nations who come in and join the coalition generally defer to us for coordination purposes. We use a standard multinational interception force ROE. To be honest with you, there are some nuances of differences. Some nations have some limitations that do not totally align with the ROE of the United States. But, as I said, we will accommodate that. We have nations who will not operate inside Iranian claimed territorial waters that are not recognized under the 1982 UN Convention of the Law of the Sea. Our nation chooses to operate inside these Iranian claimed, but not recognized, territorial waters. We have nations that will not operate in Iraqi territorial waters. Our nation chooses to. So as the coordinator, I manage those forces such that each nation's limitations and restrictions are acknowledged and respected. We have a common standard operating procedure—COMFIFTHFLT MIO Operational Task Supplement. When a ship comes into our coalition, we give them a copy of it and go out and brief them. They then use that as their standard SOP throughout their time with us in the Gulf.

Figure 11. Forces

- **Four to six frigates, destroyers and cruisers**
- **Patrol boats**
- **Special Operations craft and personnel**
- **Boarding teams**
- **Command, Control, Communications**



KUWAITI P37 PATROL BOATS

MIO Operations Today

I thought you might be interested in what is going on in the Gulf today—what nations are participating [Figure 12]. Argentina just came in with a boarding team on board the *USS John Hancock*, and we have them up in the northern Gulf conducting boardings as we speak. Canada has a frigate that came over with the *USS Constellation* Battle Group and is about to finish their deployment in our region. Kuwait Navy and Coast Guard patrol boats participate regularly in the operation. New Zealand has a frigate with us today. UAE—their Coast Guard units down around Dubai interdict Iraqi oil smugglers coming towards Dubai. The United Kingdom has a frigate, and of course the U.S. On any given day we have about four to six surface combatants in the Gulf, and we use several P3s to support the MIO.

Figure 12. MIO Operations Today

	Nations	Forces
	Argentina	Boarding Team
	Canada	Frigate (1)
	Kuwait	Patrol Boats
	New Zealand	Frigate (1)
	UAE	Coast Guard Units
	United Kingdom	Frigate (1)
	USA	Combatants (4-6) P-3 Aircraft (3)

I frequently get asked about the GCC contribution that I mentioned to you earlier in the briefing. I thought it would be useful to review what they are doing as a group [Figure 13]. Bahrain, of course, provides our NAVCENT/FIFTHFLT Headquarters, a major contribution to our coalition in the Gulf. UAE provides Coast Guard units and accepts diverted vessels. When we interdict a vessel and it is guilty of violating the sanctions, we divert it to a third country: UAE accepts those. UAE

Figure 13. GCC Contribution

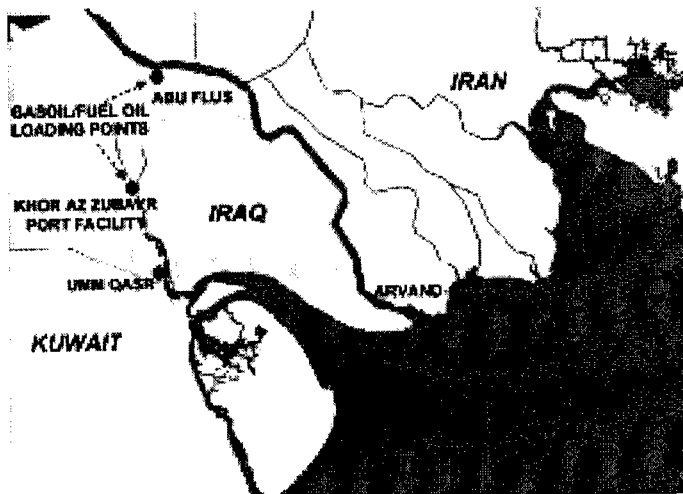


provides a major Fifth Fleet and coalition logistics hub as well. Saudi Arabia accepts diverted vessels. Kuwait provides Navy and Coast Guard units and accepts diverted vessels. Qatar provides P3 basing at Doha International Airport on occasion and accepts diverted vessels. Oman at Mahsirah provides P3 basing and accepts diverted vessels. So we get a major contribution from the GCC in the Gulf in support of our MIO operation.

Occasionally we conduct an operation we call the Surge Operation [Figure 14]. I mentioned that the waters around the northern Arabian Gulf are quite shallow and we cannot get surface combatants up into those waters. So we have to bring in our special operations craft, and for the most part we use Kuwait shallow draft patrol boats. We move right up into the area just outside the mouth of the Khwar Abd Allah and try to interdict the shipping coming out of the Khwar Abd Allah before it can make it into Iranian territorial waters. We have conducted seven of these operations in the last year and they have been very, very effective. We have pretty much shut smuggling down out of the Khwar Abd Allah. It also disrupts the Shatt Al Arab smuggling traffic. We find that when the Surge is present, the Shatt Al Arab traffic does not move and they wait until we are gone. This gives us the ability to reconstitute and get ready for a bigger range of smugglers coming out of the Shatt Al Arab after we shut down the Surge.

How have we done in the MIO? In nine years we have cleared over twenty-eight

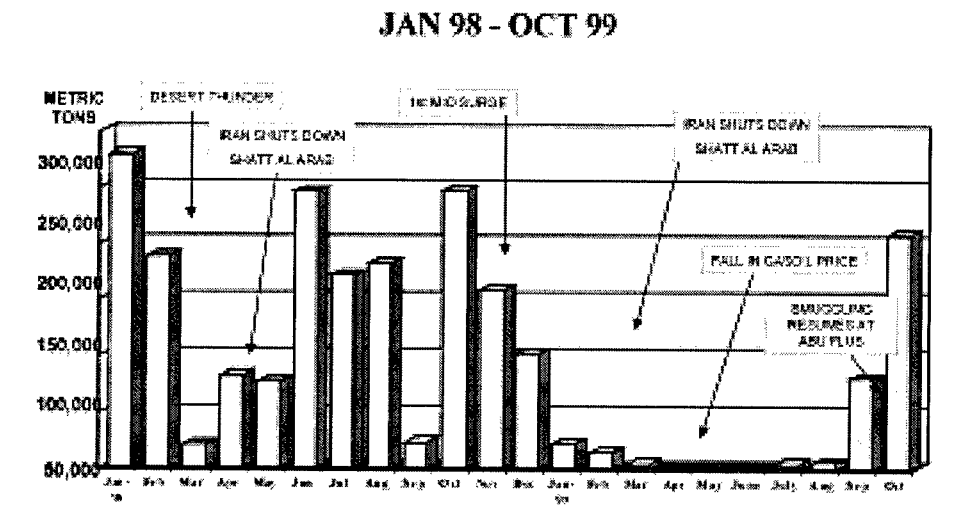
Figure 14. MIO Surge Operations



thousand ships, boarded over twelve thousand, and diverted six hundred and eighty-five. We believe that we have stopped the importation of weapons of mass destruction, war materials, and trade goods. We have disrupted the flow of illegal oil out of Iraq. We have not eliminated it, but we have in a major way disrupted it. Coalition presence interrupts the smuggling activity. We are a problem for the Iraqi illegal gas/oil smuggling operation. Our coalition has been a tremendous success over the years in the MIO.

Figure 15 shows you that we monitor how effective we are. We take a look at how many metric tons of oil have departed Iraq and how many we have interdicted. You see that there has been some ebb and flow of smuggling activity. In the last year, we thought we were really doing a great job. We were convinced our MIO Surge produced almost no smuggling during that period. But now all of a sudden it started back up and we think it has to do with the price of oil, which is about \$24 a barrel these days. They buy it for about \$95 a metric ton in Iraq, sell it for about \$185 a metric ton in Dubai. The Iranians take about \$50 a metric ton to use the territorial waters, so the smuggler can make about \$50 a metric ton in this operation. So that is what we think has caused him to come back into a heavy operation. In September they did not do much last year. We assumed, based on our analysis, that this had to do with President Khatami's speech in the UN so the Iranians shut down their waters. Back in March 1999 it looked like Desert Thunder was going to come to a head, and the Iranians again shut down their territorial waters.

Figure 15. Iraqi Gas Oil Smuggling



But what is the real message to Iraq? I am convinced that it is not necessarily measured by the quantity of gas oil interdicted or intercepted or dollars taken from Saddam. I believe the message is measured by the resolve and commitment of nations willing to come together to signify their commitment to oppose those who would undermine regional peace and stability. It is a political-military commitment to common values. That is what we are all about, that is the message we are sending to the Iraqis. They get up every morning and they face a coalition of several nations committed to bring peace and stability to the region. That is what I think the value of the coalition is.

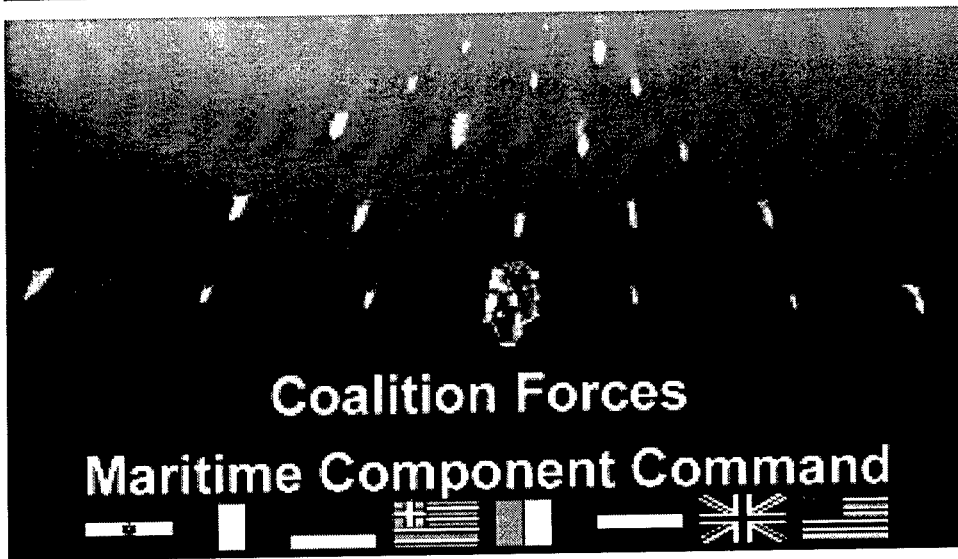
Bright Star

Now let's talk about Exercise Bright Star that we concluded on the second of November. I spent a couple of days in Aqaba, Jordan, and then came straight to

Newport. We haven't had a chance to study it in detail, but I thought I would give you a little bit of perspective on Bright Star.

I mentioned it was at the high end of the conflict spectrum. Bright Star was preparations for major theater war. I served as the Coalition Forces Maritime Component Commander. An Egyptian colleague was my co-commander. There were eight nations in our maritime coalition. Figure 16 is a picture of the photo-ex showing twenty-two ships from eight different nations that participated in Bright Star. Many of you have been involved in a photo-ex, and I can tell you I have never seen one better than that. This is a classic example that there is a job for everyone. The little guy in the back of the formation is a tugboat that was very helpful to us in the amphibious operation. Up front we have an aircraft carrier escorted by coalition patrol boats and warships 250 yards apart. Interoperability is the key, and the warfighters will figure it out. They will work it out. That is an excellent display of coalition operations in my book.

Figure 16. Bright Star



The concept for Bright Star, as shown in Figure 17, was eleven coalition nations. We had dramatic forces involved in this operation—over 70,000 personnel, 23,000 in the naval component, about 35,000 ground, 12,000 air, and a couple of thousand in the special operations forces. We ran a command post exercise and a field training exercise. Although they were not closely linked during this Bright Star, we have committed ourselves in the next Bright Star to link both the CPX and the FTX and integrate those more. This exercise was clearly an effort on our part, our coalition of eleven nations, to prepare for major theater war if we had to. It was a tremendous opportunity for interoperability training.

Figure 18 illustrates what the maritime component looked like. I already told you 23,000 people and 55 ships were involved in the exercise—a pretty formidable

Figure 17. Bright Star Concept

- **Eleven coalition nations**
- **Dramatic air, land and sea forces**
 - Ground Forces: 35,000 Soldiers and Marines
 - Naval Forces: 55 ships, 132 aircraft, 23,000 people
 - Air Forces: 12,000 Airmen
 - Special Forces: 2,000
- **Command Post Exercise (CPX)**
- **Field Training Exercise (FTX)**

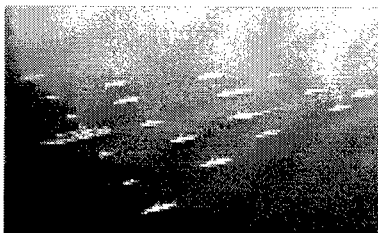
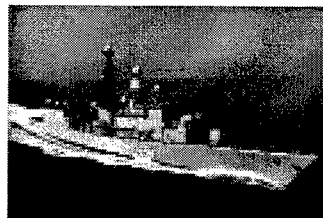
Preparation for major theater war

naval force. We also had 132 aircraft; over 70 percent of these aircraft were supplied by the maritime side of the operation.

I should tell you a little about the scenario, which took place in Egypt, so you understand what we were doing [Figure 19]. Our scenario was Orangeland invaded Greenland and pushed the Greenland forces well back of their national border. The coalition was formed to restore the border of Greenland and to shape Orangeland in a way that they would be non-hostile once the war was over. We had a fairly benign naval threat from Orangeland. It enabled us to neutralize that threat very early and then use our huge naval force to influence the land campaign during Exercise Bright Star. We did that primarily by conducting an amphibious assault here at Marsá Matrūh behind the second operational echelon of the Orangeland forces. We were successful in fixing those forces and then building a lot of

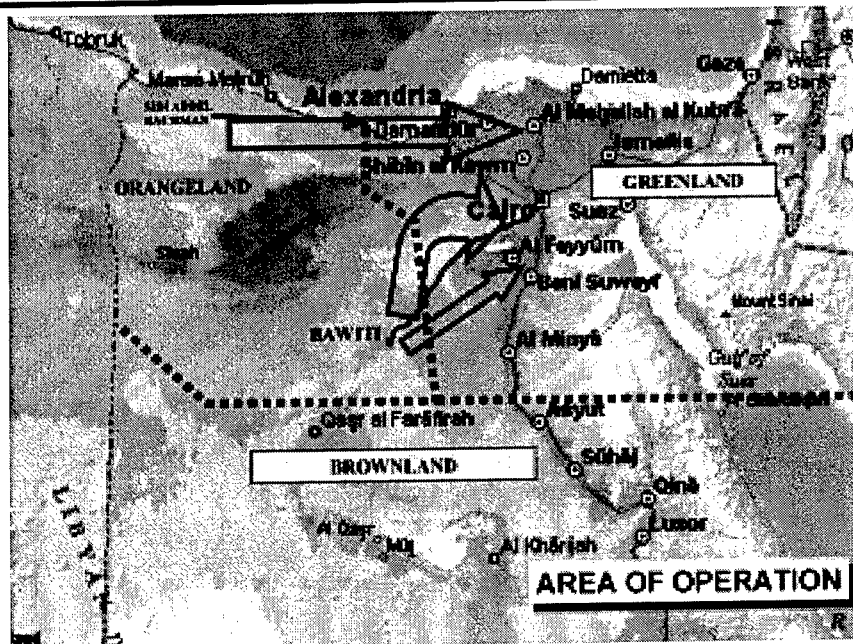
Figure 18. Bright Star Maritime Component Command Forces

- **PEOPLE**
 - BAILORS/MARINES - 22,293
- **SHIPS: 55**
 - AIRCRAFT CARRIER - 1
 - AMPHIBIOUS SHIPS - 17
 - CRUISER - 1
 - DESTROYERS - 3
 - FRIGATES - 11
 - MINE COUNTERMEASURE SHIPS - 9
 - SUBMARINES - 2
 - COMBAT LOGISTICS FORCE - 11
- **AIRCRAFT: 132**
 - CARRIER AIRWING - 71
 - AMPHIBIOUS GROUP - 36 HELOS / 4 AV-8B's
 - CTG 56.1 HELOS - 17
 - MARITIME PATROL - 2



A FORMIDABLE NAVAL FORCE

Figure 19. Bright Star Scenario



momentum from Greenland ground forces that ultimately brought the war to a quick end. It is a great scenario executed very, very well. Lots of field training exercises around that scenario.

Figure 20 illustrates what we accomplished during Bright Star. I will let you read the numbers. As you can see, it was a fairly significant exercise on the field training side—lots of live fire, lots of events, three big replenishments at sea where everybody had an opportunity to replenish. We flew nearly eight hundred air-to-ground

Figure 20. Bright Star Coalition Naval Training

- 25 Anti-Air live fire exercises
- 21 Anti-Surface live fire exercises
- 34 Submarine tracking events
- 8 EW tracking exercises
- 3 Major replenishments at sea
- 761 Air-to-ground strikes



strikes in support of the Coalition Forces Air Component Commander. We accomplished training in all of the warfare areas that you see listed in Figure 21 and had a huge effort in mine countermeasures, primarily linked to our amphibious operation. We did not want to become victims of mines and not be able to conduct our amphibious operation. We did that with a lot of cross-deck observers and liaison officers. We had fully integrated battle groups—that is to say that the carrier battle group, the amphibious group, and our destroyer brigade, as we called it, were fully integrated with ships from all nations. All of the commanders were international. We had a U.S. commander of the aircraft carrier battle group, a British Royal Navy commodore in charge of the amphibious group, and an Egyptian commodore in charge of our destroyer brigade. We gave each nation an opportunity to control exercise events. And as I said, we had a lot of live fire. Bottom line: much improved interoperability in this coalition after Bright Star concluded.

The highlight of the exercise for me was the missile exercise we conducted on

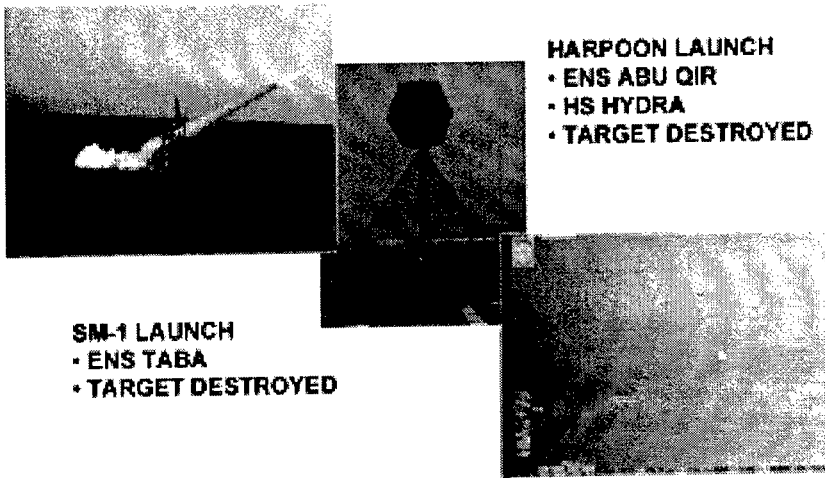
Figure 21. Bright Star Coalition Naval Training

- **TRAINING AND CROSS DECK IN ALL WARFARE AREAS:**
 - ANTI-AIR
 - ANTI-SURFACE
 - ANTI-SUBMARINE
 - SPECIAL OPERATIONS
 - STRIKE
 - MINE
 - AMPHIBIOUS
- **EXTENSIVE OBSERVER/LNO PROGRAM**
- **FULLY INTEGRATED BATTLE GROUPS**
- **ALL PARTICIPATING NATIONS COMMANDED EXERCISE EVENTS**
- **MULTIPLE LIVE FIRE EVENTS**

<p>The Bottom line: Improved interoperability</p>
--

the 21st of October 1999 [Figure 22]. In my view, this set the tone for the exercise, and this was interoperability tested to the hilt. We had the Egyptians scheduled to fire a surface to air Standard missile and Harpoon missile from the Egyptian ship *Taba*. We also had a Harpoon missile to be fired from the Hellenic ship *Hydra*. It was difficult to clear the range, but all the missiles were fired and fired successfully—skin to skin with the SM1 on a tactical air launch decoy, target destroyed. Then we blew the Harpoon out of the water. This is a two thousand square meter simulator. The Egyptian missile went straight through the radar reflector, blew that and all the stations off. We thought we were out of business, but our friends on the Hellenic ship *Hydra* said they still had a radar contact with the barrels, and they fired a Harpoon and completed the total destruction of the target. A tremendously

Figure 22. Bright Star Missile Exercise



successful missile shoot—I was very impressed with it. The coalition out there working together putting missiles on target—that's interoperability at its best in my mind.

The amphibious assault was tremendous—a brigade-plus size force. In my career I do not recall being involved in an amphibious operation that was so extensive. As I said, the amphibious force was commanded by a Royal Navy commodore, Commodore Kilgour, and we conducted three amphibious assaults. One was a demonstration. Two were actual FTX events keyed to the scenario. Affiliation training was the key to success, because we had six different nations involved in the amphibious operation. There was lots of interaction and interchange between the nations. We took each element and conducted a set-piece exercise before we actually conducted the coordinated operation. The photos in Figure 23 are scenes from

Figure 23. Bright Star Amphibious Assault

- Six-nation combined air and sea assaults
- Brigade plus sized force
- Affiliation training the key to success



the amphibious assaults themselves that were actually conducted in Bright Star. One photograph I am particularly proud of shows an Egyptian tank coming out of one of our LCACs from the USS *Bataan*.

I mentioned all this cross training—the list of what was accomplished is shown in Figure 24. This is pretty much every combination of soldiers, marines, and landing and raiding craft you can get. If you had some soldiers and you didn't have any raiding craft, we found raiding craft for you. If you had raiding craft and you did not have any soldiers, we found soldiers for you. We put that operation together and it ran to perfection, but it took a lot of affiliation training and a lot of briefing and debriefing and a lot of work to get to that level of expertise.

Figure 24. Bright Star Amphibious Assault

- Significant Cross Training
 - Egyptian Mirage and F-16 on CAP with U.S. AV-8Bs
 - Egyptian SOF landing from UK landing ship
 - Egyptian troops flying in from USS *Bataan*
 - Egyptian troops landing from HMS *Ocean* in UK landing craft
 - Egyptian tanks landing from US LCAC
 - Greek troops landed by Italian raiding craft
 - Greek troops landed by UK landing craft
 - Italian troops landed by UK raiding craft
 - UK/Netherlands fully integrated landing force and beach unit
-

Let me conclude Bright Star and tell you that similar to the Multinational Interception Operation, I think there is more to Bright Star than just preparations for major theater war. I think that what Bright Star says is there are at least eleven nations willing to come together to demonstrate significant military capability and resolve to those who would undermine peace and stability in the region [Figure 25]. It is a political-military commitment to common values. That is what MIO is all about, and that is what Bright Star is all about, in my view. That concludes my briefing to you this morning. I am now ready to take any questions that you might have on any subject—anything that you want to talk about. Everybody has a perfectly crystal and clear view of how all these things run? Any questions at all?

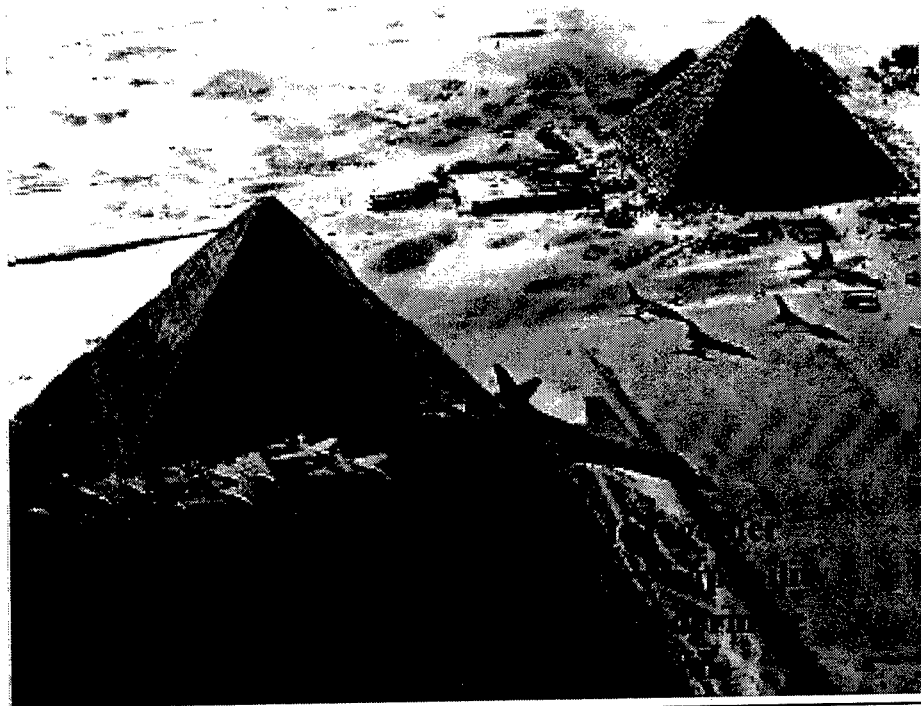
Unidentified Speaker:

Admiral, I do not know if this is your exact area of expertise. I am going to ask you if you can contrast MIO with any of the similar operations that might have come up in the Kosovo conflict.

Vice Admiral Moore:

Well, that is a very good question. I was just talking to Admiral Ellis last evening, and I told him I would like to get together with him at some point and have him share some of his experiences with me because I have not had much of a chance to study the details of Kosovo. He mentioned one to me that I hope he does not mind

Figure 25. Bright Star Conclusion



me mentioning. He tried to put together a MIO operation during Kosovo, if you will, and it was difficult to get it accomplished during the time that they had available. I enjoy an operation that has been going on for nine years, so I inherited a well-oiled MIO operation with nine years' worth of experience.

There is no question in my mind given enough time we could undoubtedly put together a good MIO in the Adriatic, but it takes some time. You can see from the details associated with the MIO, it is not something you create overnight. Good question, though. Any other questions?

Unidentified Speaker:

Could you comment on your ability to communicate with the various coalition partners?

Vice Admiral Moore:

Very good point. I had some vignettes in the brief, but because of time I did not include them. The question was, how do we communicate with our coalition partners. We make it happen is what we do, but in the interim, we will provide it. I have radios with my command, and I have people. For instance, recently we did an operation with one of the ships in the UAE. We moved a Chief Petty Officer and a UHF aboard the UAE ship, and we had communications with them. During the early days of the MIO surge, we put satellite radio in the Kuwait Naval Force Commander's headquarters so that we could communicate with him. We took SEALs

and put them in the patrol boats with handheld radios to help us solve these communications problems. We do whatever it takes to get the operation accomplished and to establish what minimum communications we need.

Most of our ships come well equipped, so we do not have too many problems. We are trying to do more work with the thing we call "battle force e-mail." We have successfully installed "battle force e-mail" on our friends from Australia and New Zealand and others in the region in our coalition, and we look forward to someday having that throughout the coalition. Good question. Any other questions?

Gentlemen, it has been a pleasure to be with you this morning. I look forward to spending the next couple of days with you in this very important International Seapower Symposium. Thank you very much.

Seminar Introduction

Vice Admiral Arthur K. Cebrowski

President, Naval War College

United States Navy

and

Dr. Alberto Coll

Dean of the Center for Naval Warfare Studies

United States Naval War College

Vice Admiral Cebrowski:

Thank you very much. And thank you, Admiral Moore, for your very practical and down-to-earth presentation. You certainly set up the issues before us in a very useful, realistic way. The story is told that during the Napoleonic Wars in Europe, Napoleon was asked which country among those in Europe arrayed against him he would rather fight. He is reported to have responded, "Allies."

Napoleon's jaundiced view of coalitions aside, clearly coalitions are the way of modern armed conflict. Coalitions, after all, are operating today in East Timor, Kosovo, and the Arabian Gulf, as we learned from Admiral Moore in great detail. Desert Storm was brought to a successful conclusion by a coalition of over twenty-four nations. The importance of coalition operations is reflected in United States military doctrine. Joint Publication Number Three provides that "United States forces should be prepared to operate within the framework of an alliance or coalition." That said, the same factors that made coalition warfare difficult for allies fighting the French in Napoleon's day: command and control problems, communications difficulties, differing political and military objectives, are of course still with us today.

At this year's International Seapower Symposium, we're going to do something new. Instead of the Regional Symposia that we conducted in the past, this year we're going to conduct a coalition-building war game based on a scenario that asks the coalition to establish acceptable rules of engagement (ROE), including self-defense policies, to carry out a United Nations-mandated multinational maritime interception operation.

I'm not going to go into detail concerning the war game itself. Doctor Coll, who will follow me, will do that for the group. However, I'd like to discuss briefly the thinking that led to our decision to schedule this seminar war game as part of this year's ISS, and the reason we have chosen rules of engagement as the primary focus of the game. The United States Standing Rules of Engagement define these rules as follows: "Directives issued by competent military authority which delineate the circumstances and limitations under which the United States forces will initiate or

continue combat engagement with other forces encountered." As our own experiences in Somalia and Beirut tell us, appropriate rules of engagement are essential to ensure adequate force protection and successful mission accomplishment. Where rules of engagement do not reflect the reality of the mission or the threat, military forces can be placed in peril and mission accomplishment imperiled as well.

Under the United States Standing Rules of Engagement system, the rules are the product of three interests: first, national policy as defined by the National Command Authority; second, the Military's requirement to accomplish its mission and protect its forces; and third, the International Law of Armed Conflict and applicable domestic law. To the extent that other coalition partners have rules of engagement driven by the same factors, differences in political objectives, concept of the mission or threat, and security concerns about releasing rules to other nations can greatly complicate the process of building a common coalition ROE. For example, in the three multinational maritime interception operations sanctioned by the United Nations Security Council, only one of them—Operation Sharp Guard, conducted in the Adriatic against Yugoslavia—had unified rules of engagement. When maritime interception operations (MIO) were directed against Iraq in the Arabian Gulf and Red Sea in 1990, each coalition participant brought its own ROE and operated under them. We, of course, learned more about that from Admiral Moore. At that time, the United States Rules of Engagement were classified "SECRET—NOFORN" and could not even be shared with allies. Regular meetings were held where coalition members met to discuss operational issues, including the ROE under which they were operating. This informal exchange of information was sufficient to permit MIO forces to operate as a coalition in a relatively low-threat naval environment without a common ROE. Today, U.S. supplemental MIO ROE in the Arabian Gulf are confidential and releasable to all other participants. They are included as part of the MIO operations order, and other nations are encouraged to adopt the ROE as their own. But we learned from Admiral Moore that there are, of course, constraints. Looking at the Haiti maritime interception operations, there were no common ROE. However, there was no credible military threat.

I submit that ROE lessons learned from these three MIOs are that in a low or no-threat environment with a relatively straightforward mission, the problems posed by a lack of common coalition ROE can be worked out; that is, worked around. In a higher threat environment, such as in the Adriatic, Yugoslavian naval forces were confronted by a mature alliance that had operated together for years using a common ROE. They wisely chose not to confront that force militarily.

The NATO ROE reflect a consensus of all the NATO partners and consequently reflect compromises among the alliance. Although not all NATO military commanders are happy with these compromises, the Rules themselves have proven adequate to get the job done when NATO has been called upon to exercise military force.

Well, let me now briefly just mention the goals that we hope to achieve in our discussions in our Seminar game. First, we want to share our Rules of Engagement with you. In your read-ahead materials, you were provided with the key enclosure to the United States Standing Rules of Engagement. This document provides general guidelines on the U.S. approach to individual, unit, and national self-defense

and guidance governing the use of force for mission accomplishment. I hope that distributing this information will promote a wider understanding of U.S. self-defense policies and our ROE generally. Second, we seek through the give and take of the ROE discussions in the syndicates to get a better appreciation of the ROE practices of other nations. Third, we hope to identify and understand any disagreements other nations may have concerning United States ROE. Fourth, we've viewed this war game as a means to conduct a viable coalition-building exercise. In carrying out this war game, there are no right or wrong solutions. The game will have succeeded if, at the end of the game, we can identify broad areas of agreement on ROE issues and areas of disagreement that may range from minor technical issues that can be easily worked around, to fundamental disagreements that could make it difficult for some nations to participate in a coalition with a consensus ROE. Finally, we hope these discussions will provide the impetus for opening a dialogue on ROE issues between the Naval War College here and representatives of your nation.

In closing, it is our hope that the insights gained from this war game and future interactions related to ROE issues among the participants of this International Seapower Symposium will facilitate the establishment of unified coalition ROE in future combined operations. Now to explain the seminar game in more detail, I'd like to introduce our Dean of the Center for Naval Warfare Studies, Dr. Alberto Coll. Dr. Coll.

Dr. Coll:

Good morning. I would like to go over the details of how we're going to structure our exercise. Let me take a few minutes to do that. When I have completed my briefing, Mr. Chuck Breen from the War College Staff will provide a briefing on the actual game scenario. After this briefing, we will break for lunch at the Officer's Club, to be followed by the first seminar session this afternoon.

For this game, the participants have been divided into eight different syndicates or groups. When we return from lunch, you should go directly to the seminar room where your syndicate is scheduled to meet. The names of the other persons participating in your syndicate and its location are included in your registration packets. As you look over the list of participants in your syndicate, you will see that the groupings are not according to geographic region, as in past symposia, but instead each syndicate is composed of a number of nations from all over the world.

During the rules of engagement seminar war game, you are going to be asked to play several roles: one, as a commander of a coalition Joint Task Force or CJTF; two, as a member of the commander's staff; three, as the chief of your service; and four, as commanding officer of a ship assigned to the task force.

The coalition itself will be composed of the nations represented in each syndicate, whatever those happen to be. In our scenario, the coalition members have decided to carry out maritime interception operations to enforce UN Security Council Resolutions to prohibit the shipping of weapons and other military equipment into a province of the nation of Green, which is faced with an insurgency supported by the nation of Orange. Notice we don't use "Red" and "Blue" but "Orange" and "Green."

Each syndicate will work to achieve a consensus on self-defense and mission accomplishment rules of engagement guidance for the execution of the maritime interception operation. As time permits, each of your syndicates also will be asked to apply the consensus rules of engagement in various scenario settings and to examine issues that participants might have with interpretation of those rules and their compatibility with the customs, cultures, and national traditions and policy guidance of your respective countries. In addition to this plenary session and the two seminar sessions, there will be a final plenary panel discussion on Wednesday morning; devoted to a discussion amongst all of us of the key issues that you address during the seminar sessions today and tomorrow. Each of your groups will choose a spokesperson to share the issues raised in your discussions at the panel discussion.

The first seminar, to be held this afternoon at 1400, will explore rules of engagement concepts of self-defense. Under the scenario, the leader of coalition member nations have agreed to assign forces to the operational control of the Coalition Joint Task Force (CJTF) commander as long as acceptable rules of engagement are established. The CJTF commander has been directed to prepare an operational plan to carry out the operation and to include in that plan rules of engagement appropriate to it. Your group's first objective will be to work towards establishment of a consensus on self-defense guidance for the CJTF. Your starting point for this work will be the unclassified portion of the United States Standing Rules of Engagement, which were referred to by Admiral Cebrowski. This will require the group to consider the following concepts. The authority and responsibility of a commander to defend his unit is concept one; concept two—hostile act; concept three—hostile intent; concept four—unit self-defense; and concept five—declaring forces hostile. You will want to look at these concepts very closely as you argue about applying them in this particular scenario.

The second seminar will be held tomorrow beginning at 1400. During tomorrow's seminar, each syndicate will be asked to establish appropriate mission accomplishment rules of engagement for the maritime interception operations based on alternatives provided by the various syndicate moderators and additional options that you may want to offer as suggestions. You will be asked to provide guidance on the following: first, how to conduct this maritime interception operation; second, what if any guidance or notice should be provided to the international community concerning maritime interception operation procedures; and third, what if any specific measures should be adopted in response to whatever threats you expect you will encounter. Seminar moderators will be available to assist and to offer suggested solutions—all of it, of course, in the context of your own views on the subject. Finally, you will be asked as the CJTF commander and also as ship commanding officer to be prepared to test the consensus rules of engagement in responding to various threats presented during the conduct of maritime interception operations. In doing this, perhaps you may discover that the rules of engagement that you had agreed upon were not sufficient to secure the security of the coalition forces or to effectively enforce the embargo. Such a conclusion does not mean you will have failed. On the contrary, remember there are not right or wrong solutions to this war game. The value of the game is in the process by which

your syndicate—your group—carries out its negotiations and discussions and the insights gained into how to develop coalition rules of engagement.

I ask each of you to be frank, forthcoming, and utterly candid with your ideas, your opinions, and your insights. On the last day of our Symposium, Wednesday morning, we will have, as I mentioned earlier, a panel discussion that will present the key issues that were raised throughout all of your small groups. Each of the eight syndicates will be asked to choose by consensus a spokesperson to represent that syndicate and its views on the panel. I wish you the best of luck in this challenging exercise, and I look forward to the discussion of the results of your efforts on Wednesday morning at a panel which I will chair.

One note about our procedural rules: our plenary sessions—that is, these large sessions that we're having here—are conducted on the record, meaning that all remarks, questions, and answers will be recorded verbatim and published. On the other hand, all comments in the seminar sessions as you break out into smaller groups this afternoon and tomorrow afternoon will be on a not-for-attribution basis. Therefore, please, I urge you to be candid and to feel free to present your views consistent with your nation's operating rules. Have fun. Enjoy the seminar sessions. And I encourage and invite you to share your expertise and your experience with your shipmates in this audience.

Global Maritime Security: A Coast Guard Vision

Admiral James M. Loy

Commandant, United States Coast Guard

Amenities

Admiral Johnson . . . Vice Admiral Cebrowski . . . Symposium delegates . . . Ladies and gentlemen. It is a great honor to speak with you all today, and I thank Admiral Johnson for the opportunity. My presence at this podium makes a statement about the world we live in today and especially about the maritime dimension of that world.

The phrase "national security" and its subset "maritime security" have come to mean something very different as we enter the new millennium. Ten years ago, the phrase "national security" was virtually synonymous with the phrase "national defense." We thought in terms of nation-state sponsored threats and acted accordingly.

Today, we see threats from many sides of the maritime horizon. Alien migration patterns with huge social costs; narco-traffickers that literally threaten the economic stability of nations; extinction threats to protected species and food sources in the sea; cyber threats to electronic systems we've come to depend on. These are just a few of the many faces of our national security threat inventory as we enter the next century.

I've watched the ISS agenda and the regional ISS agendas reflect this reality more and more each year. The Coast Guard's domestic mission mandates—and especially our law enforcement authority—are recognized more and more for their relevance and value against these newest national security threats. We maritime services must join forces as never before to produce collaborative solutions to these global challenges.

Admiral Johnson challenged us yesterday to rise to the task of building international coalitions. He suggested the need for coalition rules of engagement. He described America's maritime strategy for the naval century about to begin and challenged us to understand its critical elements. He described taskings on the rise and resources on the wane. He suggested our diversity of experience had come to be our strength. He described technology, information networks, information sharing, access, sustainability, and interoperability as both challenges and opportunities as we make our commitment to decisively influence events ashore.

I'd like to offer a few Coast Guard thoughts to add to his list of challenges and opportunities.

Introduction

Last week, the *Wall Street Journal* ran an article explaining why the Federal Express company is making huge strategic investments—many hundreds of millions of dollars—that will fundamentally shift the direction and emphasis of the company.

The impetus for FedEx's changes comes partly from its assessment of the competitive landscape, but mostly from a hard-eyed analysis of the growth prospects for its core business of domestic overnight delivery. FedEx has concluded that e-mail, fax, and the Internet will combine with better planning by its business customers to *dampen demand* for the service on which the company was built. They see the writing on the wall and are making changes to stay competitive.

The article is relevant to our symposium today because it presents an example of a company that is altering its strategic plan at a time when all current and lagging indicators argue for maintaining course and speed. The implicit lesson for those of us in the maritime security business is that we must adapt to changing environments before those changes overtake us.

Thesis

Hindsight is always 20/20, but I'd like to go back ten years to help us place maritime security in the context of the changing global landscape. I'd like to look at the aftermath of two events from 1989 that shape our world today. The events themselves are completely unrelated, but I would like to link them by a slender thread for the next few minutes to make two points about the future of global maritime security.

The first event is the fall of the Berlin Wall. Ten years ago the free world rejoiced at the end of the Cold War and expected the arms race to give way to an era of comparative tranquillity.

The second event is the grounding of the oil tanker *Exxon Valdez*. Ten years ago, the world was shocked by the economic devastation to Prince William Sound and appalled by the potential for similar spills in other parts of the world. There was very little public confidence in our ability to ship the oil we needed without unduly hazarding the environment.

Things didn't turn out exactly as people expected.

Ten years after the Berlin Wall, the world is in many ways a more dangerous and unstable place. Ten years ago, we looked at maritime security primarily within the context of the Cold War. Today, we face a dizzying array of threats that have either emerged or intensified since the wall came tumbling down.

Ten years after the *Exxon Valdez*, every measure indicates that marine transportation has become significantly more reliable. Exceptional international cooperation among governments and industries has led to huge improvements in safety and environmental protection. We're better at responding to spills, and there are fewer of them. Spills per billion gallons of oil shipped, number of spills, and the number of major spills are all down significantly.

So what are our lessons here?

The fall of the Berlin Wall calls us to make significant strategic adjustments so as to prepare ourselves for the new set of challenges we are likely to face. The *Exxon*

Valdiz example calls us to work together within the international community to overcome those challenges.

Common Security Concerns for All Maritime Nations:

The starting point for our working together is acknowledging that every maritime nation has a common set of maritime security issues just as we have a common set of safety issues. Today, "maritime security" cannot be limited to a military connotation. Rather, it refers to the whole spectrum of maritime security issues, including safety, law enforcement, exercising sovereignty, environmental protection, as well as the military aspects.

Each nation has its own unique circumstances, but in general we face the same broad categories of maritime security challenges. We have common interests in securing our maritime borders against well-financed operations that smuggle arms, drugs, and people. We have security and humanitarian concerns regarding illegal migrants fleeing economic deprivation and ethnic conflict. We all must maintain vigilance against terrorist sabotage in key ports and waterways. Piracy appears to be a growth industry worldwide. All of us share these problems.

We also share a list of other concerns that aren't always seen as maritime security issues but that have clear security implications. We're all interested in fostering trade by maintaining safe and efficient marine transportation systems that are keys to economic growth. We all want to prevent encroachments on fish stocks in our Exclusive Economic Zones. We all want to remove the threat of substandard ships threatening the safety of other waterborne vessels and the marine environment.

The security and well-being of every maritime nation depend on our effectiveness at addressing this mix of challenges that goes far beyond the traditional military threats upon which we concentrated exclusively ten years ago.

Applying the 10-Year Lesson of the Berlin Wall: Adjust to the New Environment:

I asserted earlier that the "ten years after" lesson from the Berlin Wall is the need to make strategic adjustments now if we hope to continue being successful further down the road. Let me share three adjustments the Coast Guard is making as we position ourselves to provide the service our country will ask of us in the years to come.

Marine Transportation System (MTS):

The first is our joint leadership with the Maritime Administration in a Department of Transportation initiative to improve our Marine Transportation System. The Coast Guard is committed to providing a safe, efficient, and environmentally sound Maritime Transportation System that will enhance U.S. economic productivity, facilitate domestic and overseas trade, and provide security well into the next century. This issue is a clear example of the importance of addressing major issues before they assume the proportions of a crisis.

It would be hard to overstate the importance of an efficient Marine Transportation System to the continued prosperity of our nation. Ninety percent of America's export-import trade tonnage is carried by ships. According to the Maritime Administration, U.S. ocean-borne foreign trade accounted for nearly one billion tons of cargoes, valued at \$100 billion. Domestic shipping serves more than

90 percent of the U.S. population, moving nearly one-quarter of the nation's freight for less than 2 percent of the total annual freight bill.

Furthermore, defense-mobility plans anticipate that more than 90 percent of military equipment and supplies will move by sea in future contingencies. Our obligation to ensure access to strategic ports and waterways has enormous security implications.

Commercial vessels make about 70,000 port calls in the United States each year, and the American public operates about 20 million recreational craft. As these traffic levels grow, congestion and competition for access to U.S. waterways will become significant issues with maritime security implications.

The capacity and organization needed to handle these traffic volumes won't get created by themselves, and we can't wait until our ports and waterways become overtaxed to the point that they constrain either economic growth or military mobility. The Marine Transportation System initiative seeks to define the system we will need in the future and create momentum to put it in place.

National Fleet:

A second strategic step: Admiral Johnson and I signed the Navy-Coast Guard National Fleet Policy Statement on 21 September 1998, committing our services to focus on the operational integration of our deepwater assets. Our intention is to create synergy among the Coast Guard's and Navy's multi-mission platforms, improving capability, interoperability, and affordability so that our nation is well served across the full breadth of this widened national security spectrum.

Mission demands and budgetary constraints—both of them real-world macro-level forces—require the combined efforts of both services to accomplish effective operations worldwide. Navy ships were a critical part of our response to the Haitian and Cuban mass migrations in 1993 and 1994, and they continue to assist us in our counter-narcotics efforts in the Caribbean and eastern Pacific. Likewise, Coast Guard cutters continue to assist the Navy in enforcing United Nations sanctions in the Arabian Gulf and operations from the Mediterranean to the western Pacific.

Within the construct of the new National Fleet Policy, our cooperation will take several forms:

The Navy and Coast Guard will build a National Fleet of multi-mission surface combatants and national security cutters to meet all missions, and we will design these ships to guarantee interoperability from the start.

We will coordinate surface ship planning, research and development, and information systems integration.

To the degree possible, we will design and build Navy and Coast Guard ships around common equipment and systems. This will reduce unit costs, ease our logistics support requirements, make our ships easier to upgrade, and keep us from looking for parts out of bone-yards.

Finally, we will expand and synchronize joint ConOps, logistics, training, exercises, and—when necessary—deployments. The National Fleet of the future will be capable and interoperable. The taxpayers will be well served by our planning and by our good stewardship of their tax dollars.

Deepwater:

The third strategic adjustment is long overdue. We have embarked on a significant project to replace our deepwater capability.

The average age of our high and medium endurance cutters is 27 years, which makes them older than 38 of the 42 comparably composed naval fleets worldwide.

We are pursuing an integrated "system-of-systems" modernization program to provide new cutters, aircraft, and C4ISR systems that will enable us to meet our responsibilities.

Deepwater will be tailored for demanding missions beyond 50 miles offshore. It will complement operations with smaller Coast Guard vessels already being upgraded for activities in coastal areas. Integrated information and logistics systems will connect operational assets with their support lifeline.

The Deepwater Project's acquisition strategy is based upon a Mission-Based Performance Acquisition approach that breaks the traditional acquisition paradigm by not tailoring our requirements to achieve a predetermined mix of assets. Instead, the Coast Guard has written a System Performance Specification describing the core capabilities required to perform the entire range of deepwater missions.

One of the most crucial inputs to these specifications comes from the U.S. Navy. That input will make certain that this project adheres to our National Fleet goals.

Applying the 10-Year Lesson from Exxon Valdez: International Cooperation:

The Marine Transportation System, the National Fleet Agreement, and the Deepwater acquisition project represent our application of the lesson I drew from the Berlin Wall, namely that we must make strategic adjustments to prepare for the challenges we expect to face over the next generation. We are also busy applying the wisdom from the *Exxon Valdez* aftermath, which calls us to work together within the international community to overcome our common challenges.

As I noted earlier, the past decade has seen enormous progress. Much of the progress came through the efforts of individual corporations and the independent initiatives of individual nations. As effective as these efforts may have been, the mechanism that allowed them to come together as system improvements was international cooperation: international standards, an international sense of urgency, and a lot of hard work by the members of the International Maritime Organization.

Just as the issues raised by the *Exxon Valdez* spill seemed so numerous and so complicated as to defy effective remedies by any one party, so too do many of the global maritime security issues I mentioned earlier. Some of those problems are susceptible to the same sort of process that yielded such good results in environmental protection.

This is not a new lesson for the Coast Guard. More than 40 of the world's 70 naval forces have mission sets similar to the U.S. Coast Guard's, and we've been working with many of them for a long time. Further, our involvement in a wide variety of international forums for safety, navigation, and environmental issues has taught us the value of international collaboration on common concerns.

Conclusion

The fall of the Berlin Wall was a "good news" event in 1989, but the ensuing ten years have seen the threat posed by the Cold War replaced by many other unforeseen dangers. Conversely, the grounding of the *Exxon Valdez*, a "bad news" event, ushered in ten years of remarkable international cooperation and progress on marine safety and environmental protection issues.

Our challenge today is to take the "bad news" inherent in that wide array of maritime security threats and turn it into a good news story ten years from now in the same sort of way that our collective response to the *Exxon Valdez* made the nineties a decade of remarkable progress in marine safety.

There is cause for optimism. Remember the FedEx example I mentioned earlier? We have one enormous advantage over FedEx. As FedEx surveys the macro-economic forces, it can't expect UPS or DHL or anybody else to help it adjust to changes in its industry. FedEx has to go it alone. And they have to bet the company that they're making the right changes.

We, on the other hand—the countries represented at this symposium—may proceed with an assurance that our common interest in confronting common problems won't leave any of us to face those problems alone. Global maritime security is a team affair.

As Admiral Johnson said yesterday, trust and confidence must be the hallmarks of our relationships. I look forward to working with each of you as those relationships are forged.

Thank you.

Naval Role in Economic Security

Panel Discussion

- *Freedom of Navigation: Admiral Ellis, USN, Commander in Chief, U.S. Naval Force Europe, United States*
- *Environmental Protection: Vice Admiral Jauregui, Commander General of Naval Operations, Peru*
- *Economic Development and Maritime Resources: Admiral Matias, Chief of the Portuguese Naval Staff, Portugal*
- *Enforcement of International Law: Rear Admiral Riutta, Assistant Commandant for Operations, USCG*

Vice Admiral Cebrowski:

We will now begin the first of our three panel discussions. Each panel has an overall theme and each panelist has been assigned a subtopic for their remarks. After each of the panelists has completed their opening remarks, the panel chairman will open the floor for questions and comments from the audience. Again, probably the most important portion of the panel discussions is your questions. So please, as the presentations progress, think of questions that you would like to ask. I would like to remind everyone to use the microphones in the aisles. Identify yourself and please speak slowly for the transcription process.

The first panel this morning will discuss the naval role in economic development. We just heard from Admiral Loy. We heard from Vice Admiral Moore and from Admiral Johnson yesterday. I think everyone can see the themes starting to come together. This particular panel is chaired by Admiral James Ellis, Jr. who is both the Commander in Chief, U.S. Naval Forces, Europe and Commander in Chief, Allied Forces, Southern Europe. A Naval Aviator and test pilot, Admiral Ellis has commanded a strike fighter squadron, a command ship, a nuclear aircraft carrier, and a carrier battle group. Before assuming his current assignment, he served on the Chief of Naval Operations' staff as the Deputy Chief of Naval Operations for Plans, Policy and Operations. Many of you may be familiar with his leading role in the Kosovo conflict as Commander in Chief CJTF Noble Anvil. Admiral Ellis.

Admiral Ellis:

Thank you Ken. Distinguished guests, good morning. This panel will focus on the naval role in economic security. Both Admiral Johnson and Admiral Loy have done an incredibly successful job in reminding us all of the economic implications associated with the missions which our navies have pursued for the entire time of their existence. I'm joined up here on the dais by three consummate maritime professionals. Before I begin my remarks on the subject of Freedom of Navigation, I'd

like to introduce Admiral Matias, Portugal's Chief of Naval Operations or actually Chief of Staff of the Navy since the 2nd of April 1997. Admiral Matias is a Naval Gunnery and Naval Infantry Officer. He's had all of the right assignments and performed superbly in every one. He has a superb professional reputation, not just amongst his peers here in this forum, but superiors and subordinates alike. He is a well recognized and acknowledged international Naval professional. And it's a pleasure to have you here today sir.

To his left is Vice Admiral Louis Jaureguy. He was designated as Commander in General of Naval Operations in January of 1998 for the Peruvian Navy. He too has touched all the right bases through his distinguished career beginning with his first sea duty assignment in a Fletcher class destroyer and including command of additional ships, flotillas, Commanding General of Naval Zone and also as Inspector General of the Navy. Again, welcome sir. It's good to have you with us.

And to his left is a gentleman that I've grown to know well in my previous job, Rear Admiral Ray Riutta. He is the Assistant Commandant for Operations of the U.S. Coast Guard since July of 1997. Many of the issues that have been confronting the Coast Guard which Admiral Loy so eloquently described have fallen under his purview on the operational side as he allocates those resources across the entire spectrum of missions that the Coast Guard is filling, not just domestically but globally these days. He is a 1968 graduate of the Coast Guard Academy, a 1990 graduate of the National War College and was promoted to flag rank in August of 1994. So again, it's a pleasure to have the three of you joining me up here.

Freedom of Navigation—the absolute right of all nations to traverse the international seas, free of harassment, taxation and impedance is fundamental. Few in this audience would dispute that assertion. One could argue indeed that defense of those freedoms is the basis on which and for which all of our navies and maritime organizations were created and maintained. This right is firmly based in history and national and international policy. It must be so. Freedom of navigation is so important to global trade and security as both the Chief of Naval Operations and the Commandant of the Coast Guard have reminded us both yesterday and today. While we often properly focus on preservation of freedom of navigation for all global citizens who use it legally and ethically for their own and the common good, it is also a fact that increasingly, as we confront activities and crises generated by those who act outside the bounds of national and international norms, we encounter situations in which ironically we must deny unimpeded freedom of navigation to those who traffic in human suffering, damage the global environment and wish us and our nations ill. I would like to address both sides of that dichotomy.

The civilized world has a history of reliance on maritime trade. As such, mercantile man has from the beginning worked and fought to maintain access to trade routes on the seas. As Admiral Loy just noted, that process will only grow in the future. There has long been an element of maritime tradition, and wars were fought over restrictions, real or imagined, on national access for the so-called global commons. That is the sea that in a very real sense unites us all.

Most of our nations affirm the right of navigational freedom. And our efforts are today supported by a growing number of global policies, treaties and organizations intended to facilitate our collective efforts. The Law of the Sea Convention and the

International Maritime Organization are but two examples that join historic and venerable treaties such as the Montreaux Convention.

Open access to maritime trade routes is important to more than just a handful of large trading countries. It is vital to the global economy and in turn, as we've already noted, to global security. Perhaps you practice e-commerce and agree with Thomas Freedman on the trends of growing globalization. In addition to books and catalog items, it is now possible to order petroleum products by the millions of barrels and cold-rolled steel and grain by the ton on the Internet. Unlike Amazon.com, they will not be delivered by Air Express. No looming technological breakthroughs will allow oil by air or grain by guided missile. They will come, along with tens of thousands of containers every day, as they always have, by sea. In a globalized world where worldwide maritime trade accounts for close to 2.5 trillion dollars, and where over 90% of all trade by volume comes over sea routes, freedom of navigation through international waters is absolutely essential to our linked prosperity.

Despite considerable attention and effort, there are some negative trends in international efforts to preserve and enhance freedom of navigation globally. The number of excessive straight baseline claims continues to grow and, especially when coupled with unrecognized or acknowledged territorial sea jurisdiction, will at best restrict high seas activity and at worst increase the potential for regional confrontation. Archipelagic claims are a worldwide challenge, particularly when national assertions conflict with customary practice and practical navigational needs. Some historic treaties governing straits access no longer reflect the realities of current ship sizes. New categories of vessels such as civilian crewed support vessels and hospital ships are still restricted unnecessarily under the heading of warships. Finally, the extension of territorial authority throughout an adjacent EEZ is a trend that will increasingly restrict global access as will challenges to unimpeded transit of recognized international straits.

A most powerful tool in supporting global freedom of navigation is, of course, the United Nations Convention on Law of the Sea. Adopted in December of 1982, notwithstanding the strong objections of some to its sea bed mining provisions, the Convention was substantially amended by a new agreement on sea bed mining in July of 1994, and has, as of June of 1999, been signed by over one hundred and thirty nations. The Convention covers numerous topics, not the least of which is the all-encompassing concept of freedom of navigation and its many corollaries. Specific articles deal with territorial sea limitations, naval powers, maritime commerce, environmental protection provisions for the sea, maritime scientific research, settlement of disputes, seabed mining and many other issues.

While the treaty does much to standardize the application, assessment and adjudication of maritime claims, one should not infer that all signatories are in complete agreement. Each nation has identified what it views as exceptions to the standard rules in the terms of deposit that each nation makes after ratifying the document. The Convention is less an organization than a process for continuing to address the inevitable differences among parties and is clearly a cornerstone of the way ahead.

While the United States, as you have noted, has not yet ratified the Convention, it does enjoy observer status on the International Seabed Authority, and continues

down the political road towards full ratification. Regardless of the ratification status, this country is firmly committed to upholding the provisions of the Law of the Sea Convention.

Most nations have created policies for addressing in a non-confrontational manner those claims which exceed the accepted international norm. Such programs normally consist of three parts as described here. The irony is that if these claims are not challenged, they over time gain increased legitimacy in the eyes of the international judiciary because they then become part of the body of accepted international practice. The first step is informal diplomatic assertion. A nation endeavors to resolve unlawful maritime assertions or claims at the lowest level possible—attempt informally to guide a State's practice towards acceptance of the United Nations Law of the Sea Convention provisions through bilateral negotiations. Foreign ministers also will target an excessive maritime claim and seek through informal diplomatic channels to convince the state involved to conform its claim to international law. A second step is formal diplomatic assertion. When appropriate, the nation will file a formal written protest that addresses specific objectionable maritime claims of States. Finally, the third step is operational assertion of rights. When diplomatic efforts prove inadequate, maritime and air forces may be called upon to assert freedom of navigation rights through active peacetime transit operations.

Though there are legitimate reasons for concern over the infringement of freedom of navigation, there are some reasons for optimism as well. Clearly, the potential offered by the Law of the Sea Convention and the processes and bodies it creates is significant. The International Maritime Organization in its regular sessions has had much success in harnessing productive dialogue on a wide range of freedom of navigation issues. Discussions in progress on Western Pacific archipelagic issues have begun to identify both customary and acceptable transit routes and conditions and activities acceptable while they are being used by military vessels. Finally, the modernization of traffic control systems for the Turkish Straits will enhance the safety of ships traversing the Bosphorus, the Sea of Marmara and the Dardanelles.

As I noted at the beginning of my remarks, there are, regrettably, many occasions when the world community and international consensus must demand the imposition of limitations on those who would abuse the rights inherent in Freedom of Navigation. A few of these growing challenges are listed in Figure 1. They were part of a dialogue yesterday as well. As you see, they span the spectrum from

Figure 1. Restriction of FON

- **Interdiction of Contraband: Drugs, Smuggling, WMD**
 - **Control Illegal Immigration**
 - **Environmental Protection**
 - **Sanctions Enforcement**
 - **Blockades/Embargoes for Conflict/Crisis Prevention**
-

criminal activity to crisis response and crisis prevention. Few of our nations are not affected by some or all of these threats. In most cases, their position on your scale of importance is directly linked to how close your nation is to the danger.

Those of us who have committed our careers to insuring freedom of the seas to all fully appreciate the serious implications of selectively denying that freedom to those who would abuse it. But these are real challenges we confront daily both in our home waters and around the globe. All of them have significant or predominant naval elements. How our nations and our navies chart the way ahead is of great importance.

Figure 2 lists some of the issues we wrestle with as we work to meet the challenges of maritime threats. The critical legalities of actions taken against potential violators outside your own territorial waters must always be addressed. Sometimes bilateral or multilateral agreements can help, along with technology aided commu-

Figure 2. Challenges of Restriction

- **Extraterritorial Jurisdiction**
 - **International Mandate Requirements**
 - **Rules of Engagement**
 - **Resource Requirements**
 - **Impact on Global Commerce**
-

nication with a nation whose flag the suspect vessel flies. A high-level international mandate can be slow in developing. But, if a United Nations Security Council Resolution is forthcoming to address the issue, as Admiral Moore noted yesterday in his briefing, it can support a significant effort such as the ongoing oil and contraband embargo in the Arabian Gulf.

Unfortunately, as he also noted, embargo success depends on full support from regional neighbors on land and sea, not just in the international assemblies. Rules of engagement and definitions of contraband are frequent sticking points as we saw in our gaming exercise yesterday and as I saw recently in our efforts in the Adriatic this spring. Differing national views and capabilities can cloud the execution of what seems at first to be a clear-cut diplomatic declaration. In the Adriatic, we were never able to successfully agree on a visit, board, search and seizure regime in seventy-eight days of Balkan combat operations.

Finally, maritime enforcement efforts cost us all in terms of resources to implement them and in terms of the inevitable impact on the legitimate and honest traders. Donor fatigue and commercial impact become significant national, political and military considerations.

Despite these challenges, there are also many advances being made, some of which could serve potentially as models for future international action. Each of these efforts was a response to a specific multinational or transnational or trans-regional threat. Good people trying to do the right thing and succeeding. The Convention on Armed Robbery Against Merchant Shipping, anti-piracy efforts, the

1988 Rome Maritime Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation which defines illegal conduct and invalidates the politics of kidnapping, the International Convention Against International Crime which targets migrant smuggling, and the recent Caribbean Initiative enabling hot pursuit through adjacent international waters to deny fleeing NARCO traffickers the unintended sanctuary of national boundaries. One has to ask if these efforts could be expanded to include support for counter-proliferation initiatives against what we all know are well-documented instances of illegal arms trafficking.

In conclusion, maritime trade, indeed the global economy, depend upon maintaining absolute freedom of navigation for those who would use it for legitimate purposes. It is not just an economic concern. It strikes to the heart of maritime tradition and world security. As barriers continue to fall, the importance of freedom of navigation and the implications of its loss will continue to grow. The selective denial of freedom of navigation to those who abuse its benefits will continue to challenge our ability to forge consensus on ends, ways and means. The United Nations Law of the Sea Convention, as amended in 1994, is a powerful tool which rightly puts responsibility for maritime issues with the international community. What we do with it and if and how we continue to progress are up to us and the nations and Navies we serve. Thank you for your attention.

I will now turn over the podium to a lifelong maritime professional, the Chief of Naval Operations for Portugal, Admiral Matias. Admiral Matias will discuss with you economic development and maritime resources.

Admiral Matias:

Admiral Johnson, thank you very much for having invited me for this excellent Symposium. Admiral Ellis, thank you very much for your kind words. Dear colleagues, ladies and gentlemen, I'm delighted to talk to you briefly on economic development and maritime resources.

From an economic perspective, the sea and oceans have always influenced the political concepts and strategies of governments and countries. From quite an early stage, they have represented an important source of live resources and minerals and an excellent means of transportation for both people and goods. Sea and oceans alike have been a plus factor in the quality of life of the populations of nations around the world as well as highly useful tools in developing other related activities ashore. Throughout history, facts and events bear witness to the importance of the sea in the economic development of countries, particularly for those geographically close to the sea.

Beginning with Portugal's establishment of seaborne trade with India in the fifteenth century, maritime trade, until then confined to neighboring seas, became truly transoceanic. This was a huge step. For the first time ever, the world initiated international relations by utilizing ships and the oceans as a means of transportation, communication and economic development. International relations flourished when, in the wake of the industrial revolution, maritime transportation facilitated the overseas search for raw materials. The United Kingdom in particular needed those raw materials to feed its newly created industries. At the same time, the trade in these manufactured products helped consolidate the first industrial worldwide revolution.

Maritime transportation has evolved enormously, and despite the fact that it has lost passengers to aviation and land transportation as means of transportation, it still retains its leadership in international trade and continues to expand its role in economic relations among different countries.

Transportation is increasingly linked to the most productive sectors of a country's economy, and nowadays, rather than simple places to drop anchor, seaports have become important distribution centers for commodities and locations for value added service providers to operate. Ultimately they are serving as economic development zones providing critical impetus to the economies of the region and nations they serve. Seaports have become a focal point for maritime commerce and a linkage to other means of transportation, such as rail, road, and air. As such, maritime commerce has been instrumental in the globalization of other productive activities. The combination of air and seaport facilities is currently serving as a multiplier for economic and employment opportunities.

The importance of the fact that a coastal country's economic development is a mix of several transportation modes should not be underestimated. China's case for example is paradigmatic. Its special development zone is served by fourteen seaports. This special development zone is leading the country towards annual economic growth of approximately twelve percent.

We must not forget that ascendancy of the sea began with fisheries. It began with a search for fisheries resources. Today that catch represents around 17% of animal protein consumed by the world's population. The pressure placed on fisheries stocks by this effort has been tremendous. Consequently, today world fishing production is decreasing. The over-exploitation of stocks is evident in over 70% of the cases that have been statistically reviewed. The United Nations Food and Agriculture Organization has already announced that thirteen out of the seventeen measured fishing areas in the world are facing a crisis situation. If this is the case, how then can we possibly rehabilitate an activity that is facing such a serious, almost worldwide, crisis? That is a great challenge. One approach is through aquaculture—fish farming—an activity similar to maritime fishing which, given the profound importance of fish to humans as food, many different countries have been funding.

This is, I believe, the ideal forum to ask the following question: "In the future, how will the world economy take advantage of the opportunities offered by the oceans and the sea while at the same time preserving its resources?" This is a big question that countries, wherever they may be, will have to ask and answer. Will countries be able to focus on the sea and redirect their economies toward taking greater advantage of the sea by increasing exploitation of the different facets it offers; namely maritime transportation, shipyards and ship repair services, ports, fishing and scientific research activities and even tourism, while still maintaining those resources for future generations? Each country will have to find its own answer. It should look into its own characteristics, geographic location, geopolitical and geo-strategic position, analyze data and sector related impact on the economy, and on the workplace and employment.

We may safely assume that new marine industries will eventually emerge that are outside traditional maritime sectors, among these new activities are mineral exploitation and renewable energy sources. In the case of mineral resources, there are a

wide variety available in the oceans. As existing land mineral resources are being utilized, in some cases near over-exploitation, the sea is more and more looked upon as the great mineral storehouse. Seabed minerals may be found in almost every ocean scattered throughout the continental shelves, along the great faults and over the deep ocean bottom. In the early 1980s, sea and gravel conglomerates became important. Recently, projects for the exploitation of magnesium, copper, silver, and nickel have been planned. The Pacific shelf constitutes an area where great mineral concentrations are found, including deposits of magnesium, iron, zinc, copper and many other metals.

Currently, drug manufacturers are using marine organisms, both fauna and flora, to develop and produce new medical and pharmaceutical products. However, today the economic importance of these new means of commercially exploiting the sea remains insignificant.

Let me address one additional new frontier for exploitation of the seas. The limited number of so-called nonrenewable energy resources combined with their increasingly high costs has urged man to find other alternative energy sources. The oceans by absorbing around two thirds of the solar energy reaching the earth represent one very important renewable energy source. Tides, waves and thermal transfer all offer nearly boundless energy potential for the future.

To conclude my remarks, allow me to make some personal observations. Owing to its resources, the strategic importance of the sea is growing; a fact that will eventually contribute to strengthening the economic and strategic importance of coastal countries. This trend could become a source of conflict in the future. By exploiting sea resources, energy and mineral resources in particular, the majority of maritime countries are looking for greater economic independence vis-a-vis foreign markets and for a key tool to assist them in their economic development in the next millennium. The sea will play an unprecedented role in the lives of human beings and nations, and, as such, we may well be on the verge of a permanent maritime civilization. Certain regions may come to assume a greater strategic importance than others resulting from the discovery of relatively simple and profitable ways to exploit the economic resources of the sea, particularly those in the Exclusive Economic Zone or on the Continental Shelf.

The Exclusive Economic Zone, as the cradle of marine deposits and living and non-living ocean resources will become very important in the future. To a large measure, the legal regime that established Exclusive Economic Zones transferred to coastal and oceanic states economic rights that are usually associated with territorial sovereignty. This can lead to added responsibilities in building a credible maritime power including a competent navy to act as an instrument of national will to protect the resources of the Exclusive Economic Zone.

Thank you very much.

Admiral Ellis:

Thank you Admiral Matias. It's my pleasure now to introduce Admiral Jaureguy and welcome you to the dais again sir.

Admiral Jaureguy:

Admiral Johnson, Admiral Loy, fellow delegates, gentlemen, I'm sorry since English to me is like music, I sing well but I'm heard poorly. It's a hearing problem. I will continue in Spanish if you please.

Much of my subject has been professionally covered by Admiral Johnson and, in his presentation today, by Admiral Loy. Therefore, within the framework established by Admiral Ellis as Chair of this Panel, I will now present to you the focus of free access for all nations. This has permitted the development of commerce and exchanges among the most distant nations of the globe. Today, the health of this great common space is beginning to feel the effects of an increasing world population whose urban, agricultural and industrial activities used to effect only the coastal zones, but now extend to the oceans and even to the high seas. Official figures indicate that around 70% of the world's population lives within one hundred and fifteen kilometers of the coast of the countries of the world. The growth of this population is increasing at a greater rate than the world average which tells us that pressure on the coastal areas of the world will increase in the future.

The deterioration of the health of the oceans is in reality a security problem for all states. Preservation and environmental protection in this zone are responsibilities that all of those who share this great water space must assume. In this regard, the environmental, maritime and coast guard authorities and our navies, as well as other pertinent authorities in each state, share the responsibility of ensuring the protection of the environment in these zones and the rivers that feed into the seas. The Intergovernmental Oceanographic Commission and other international organizations have been promoting global environmental protection programs for the oceans and the coastal areas for some time. In many areas of the world, there is active participation by hydrographic, oceanographic or meteorological centers of our navies. From the viewpoint of a maritime environment increasingly threatened by overpopulation and indiscriminate use for waste disposal, these activities are making a valuable contribution for the protection of the marine environment.

Our navies' participation in national environmental programs can and should be extended to cooperating on a regional or world basis, taking advantage of the various channels of communication and cooperative institutional mechanisms that already exist. Within this context, let me relate the activities of the Peruvian Navy in the Southeast Pacific in the implementation of an environmental monitoring and surveillance system. This program established oceanographic buoys, meteorological stations and conducted scientific training for monitoring the environment of the Southeast Pacific. The South Pacific is one of the most productive areas of the ocean as far as maritime resources are concerned, however there is very little environmental information available for this important ocean region. This project, carried out within the framework of the world program for climate research provided for by the Intergovernmental Oceanographic Organization and the World Meteorological Organization, has recently received financial support from the World Bank. Additionally, we are negotiating to extend the project throughout all of the Southeast Pacific with the participation of oceanographic institutions from Colombia, Ecuador, Peru and Chile.

The navies of the world that have enjoyed free access to the oceans of the world since the time of the Dutch thinker Hugo Grotius must also accept the shared responsibility of protecting the health of this vital space. This is necessary for the good of future generations. In this regard, the knowledge of the oceans that has been gained by our navies over the years and the great infrastructure that has been established to conduct oceanographic research by our navies should be placed at the service of the world in order to assist in the common task of preserving the health of the oceans. This way we will insure the future of the world.

I would now like to address linkages between cooperation in naval technology and environmental protection and the oceans. The evolution of technology traditionally has been closely linked to the field of military development. Historically, technological advances in the naval field have led to important contributions to civil applications. Examples include radar and the Global Positioning System—GPS. Although today the speed of technological change has changed the direction of these trends, there is an accumulation of technological and scientific resources in the naval field that are being transferred to the civilian community in order to contribute to the protection of the oceans' environment. For example, acoustical detection anti-submarine systems anchored in the bottom of the seas are being used by scientists for following species such as whales and/or for the prediction of earthquakes. In addition, all navies have oceanographic information collected over period of many years that can contribute to improving the quality and quantity of information within the world's data banks and, therefore, increase the understanding of the nature of oceanic phenomena. Thus, we would be in a better position to ensure environmental protection for all of the oceans.

Another field of great environmental importance concerns the activities of coast guards as they combat oil spills and other environmental disasters. This is another area requiring regional cooperation in which naval forces can make an important contribution to the protection of the marine environment.

Freedom of navigation, illegal transportation of contaminating substances, and freedom of commerce on the high seas were all arguments used by Hugo Grotius in the 1600s to win the freedom of navigation legal battle over world territorialist positions. Portugal led the attack. The principals espoused by Grotius and the Portuguese have been maintained unchanged over time and have been consecrated in the existing law of the sea.

However, freedom of navigation also lends itself to abuses and illegal actions as discussed by Admiral Loy. Piracy, terrorism, and trafficking in illegal goods are all illegal acts that benefit from freedom of navigation. In this regard, a subject of concern linked with the protection of the environment of the oceans is illegal traffic in products such as toxic and nuclear wastes and the disposal of dangerous substances at sea. The increasingly frequent cases of transportation of toxic and nuclear waste over the oceans pose an increased risk of environmental disasters because of possible maritime accidents as well as the possibility of illegal disposal of these substances at sea. Navies of coastal states protect their interior waters and their exclusive economic zone to avoid the risk of accidents and the illegal disposal of these substances in their waters. However, there is no adequate surveillance against this very threat on the high seas. Since protection of the ocean environment is a matter that is closely linked with global ocean security, these issues must be discussed in

this type of seminar in order to decide on the role that we must play in this regard. Seminars such as this also provide a forum to discuss the cooperative efforts that will be necessary to face these threats in a coordinated fashion.

Agenda Twenty-one and the UN Convention on the Law of the Sea are two fundamental landmarks in establishing collective awareness of the importance of sustainable development and environmental marine protection. Many of the principals established in these international instruments now exist as recognized principals of international law. Environmental protection and sustainable development, which were almost unknown a few years ago, are now, thanks to these international initiatives, familiar concepts for any regular citizen in the world. These instruments and the evolution of International Law of the Sea are pointing towards concepts such as responsible ocean management, equity in marine resource management and protection of the legitimate interests of future generations in the seas. These subjects reflect the interest of the global community as a whole and were the result of declarations resulting from the International Ocean Year in 1998. Since navies are a vital component of each of our nations and part of the international community also, we should incorporate these environmental interests into our agendas and discuss our future role. In this way, not only can our aspirations be met, but also the aspirations of institutions that are closely linked to environmental protection of the oceans.

How can we promote a global maritime awareness? As a group, we navy people have a very special relationship to the sea since we undertook naval careers. This relationship shapes maritime awareness and is shared by all men who come into contact with the sea. Fisherman and merchant seamen share with us this attraction and respect for the sea; its traditions, histories and the sea's unforeseeable moods. In the face of these realities, and to conclude, we ask how can we contribute to and promote a global maritime awareness that will permit us to awaken in the common citizen interest in and respect for the sea, for its health, and its resources? The International Celebration of the Year of the Oceans and the World Lisbon Expo in 1998 were great efforts to draw the world's attention to the wealth and also the fragility of the oceans. From these and other similar efforts, we must take advantage of the fruits of our labor and coordinate our future efforts so that they do not become isolated events and lose their impact.

The world's navies have great potential for contributing to the promotion of a global maritime awareness that will help people understand why we must protect our oceans. This can be achieved through education at every level, through the use of the press and, increasingly, through the use of the Internet. All of these avenues of communication can serve as tools to disseminate the most important aspects of the ocean. Some examples of that importance include the ocean's role as a regulator of the earth's climate, its great importance as a source of renewable food resources for humanity in the future, and its importance as a means to facilitate maritime commerce among the nations of the world. The policies of environmental protection must be communicated to every stratum of society, including students. Schools and university programs should have programs of environmental education. For the general public this education can be carried out through the media and disseminated by motivational campaigns. But most importantly, we must

encourage the decision makers and political authorities to evaluate and become aware of the importance of these subjects and include them in their political agendas.

Gentlemen, for these reasons, we think that the selection of the subject of maritime environmental protection for this seminar has been a wise one. Never before has it been more important to reflect on the environmental degradation affecting our planet, especially our oceans. We are navy men, and I commend to you the protection of the security of our countries at sea. This undoubtedly is one of the great subjects for the future and one that poses a great challenge for us. We have a great opportunity to cooperate by means of our experience, organization and above all our heightened sense of maritime awareness. Thank you very much.

Admiral Ellis:

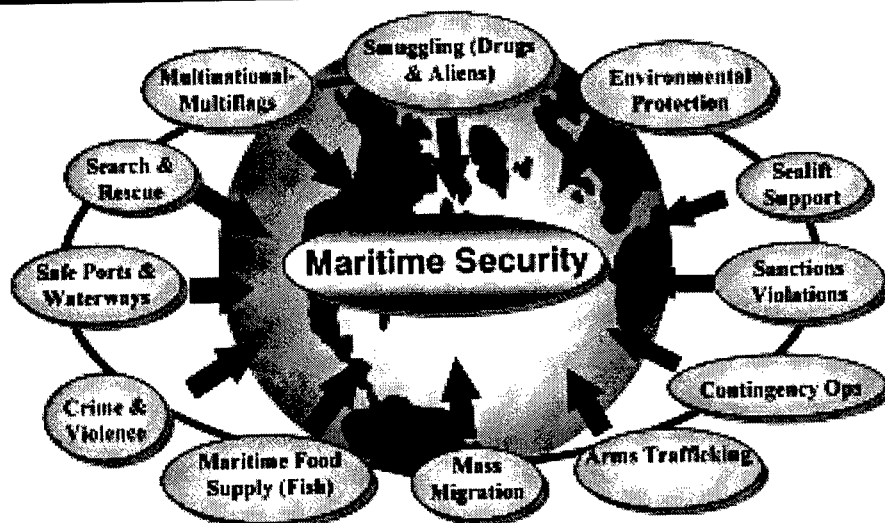
Thank you very much Louis, excellent. Now Rear Admiral Riutta will address us on the enforcement of international law from a maritime perspective.

Rear Admiral Riutta:

As each of us strive to enhance national economic prosperity, our interests overlap and sometimes collide. International law is one of the tools we use to resolve conflict, and international cooperation is the means to change the conflict into positive action for the common good. Law enforcement is a critical aspect of every nation's national security and an important factor in economic prosperity. Through effective law enforcement efforts, we create an environment where international economic conditions are improved. By making it easier for legitimate maritime commerce to move, we promote economic growth and prosperity for the greater good of all.

Nearly every country in the world depends upon access to the sea for a significant portion of their economic success, as you've heard the speakers already refer

Figure 1. International Maritime Threats: We All Face Challenges



to this morning. Even land locked states are dependent upon sea-borne movements of trade for their prosperity. For each of us, maritime security is a critical and often the most crucial component of our national security. A secure maritime environment provides a means to facilitate the legal and deny the illegal movement of goods. Maritime security, economic viability, and sovereignty are all inextricably linked.

Figure 1 lists some of the many challenges that all countries must face to create an effective maritime security regime. Broadly speaking, such diverse challenges require us to consider carefully the impact of our policies and our operations on the various citizenry we have vowed to protect. Maritime security is only the means. The desired end state is an international maritime environment where legitimate commerce flows freely and profitably across national boundaries, where natural resources are plentiful and protected, tourism flourishes, and our homelands are secure from the threats of international crime, the mass uncontrolled movements of people and the unpredictable actions of rogue states.

In the United States the Coast Guard is the lead agency responsible for combating a variety of maritime threats that thwart economic growth including drug smuggling, illegal migration, arms trafficking, piracy and other measures to circumvent custom's regulations [Figure 2]. We are also responsible for protecting U.S. maritime resources. The Coast Guard is the only United States armed service with law enforcement authority. We have a unique blend of authorities balancing the military capabilities of the Department of Defense with the prevention and

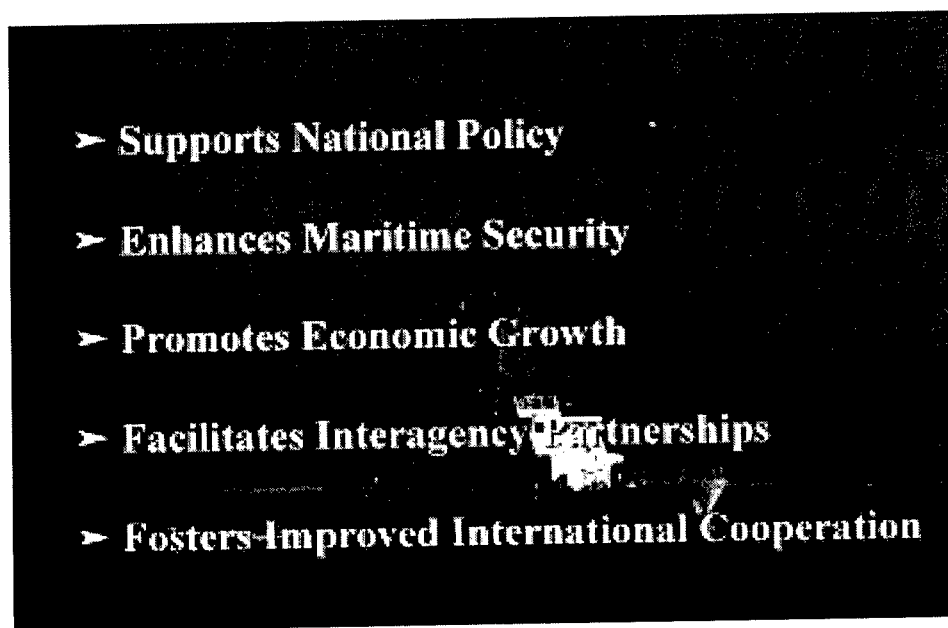
Figure 2. Why the Coast Guard?



enforcement efforts of other federal regulatory agencies such as the Customs Department, the Drug Enforcement Administration, the Border Patrol and the National Marine Fishery Service, to name but a few. Also, the Coast Guard is not constrained by the Posse Comatatus Act which is the United States law that prohibits the other armed services from conducting domestic law enforcement activities.

The Coast Guard's role extends broadly in support of national policy to include mission areas that sustain the economic, social, and environmental well-being of the United States [Figure 3]. Whether we are interdicting drug smugglers in the Caribbean, boarding merchant ships with our Navy in the Arabian Gulf, stopping

Figure 3. Maritime Law Enforcement



illegal migrants bound for the United States thousands of miles from our shores, rescuing a boater off Bermuda in gale conditions, seizing a stateless illegal drift net vessel in the Western Pacific, leading the cleanup response to a major oil spill in Puerto Rico or re-provisioning a team of scientists in Antarctica, the Coast Guard is a key part of the fabric that sustains our nation's vital national security interest.

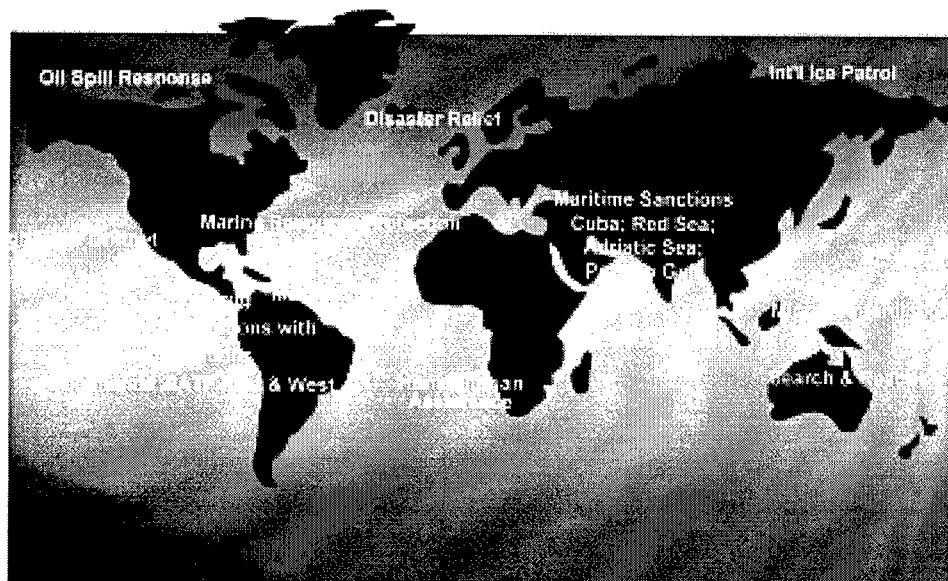
However, we certainly can not and do not do this alone. Critical to our success are the partnerships we form with other U.S. Armed Forces and government agencies as well as a variety of international agencies and maritime forces.

Though a majority of the Coast Guard's responsibilities lie close to home, the scope of our missions have worldwide reach. Increased use of the oceans for recreation, fishing, minerals development and transportation guarantees greater stresses on the marine environment, increase the opportunity for smugglers to blend in with legitimate mariners, and can pose grave risks to U.S. national interests and yours. The Coast Guard routinely patrols the Nation's waterways and the

high seas carrying out our missions. For fisheries enforcement, this means over three million square miles of United States Exclusive Economic Zone plus the high seas areas outside our EEZ to enforce international law. For our counter-drug and alien migrant missions, we stage interdiction assets in high traffic areas throughout a six million square mile transit and arrival zone in the Caribbean. The Coast Guard is also actively involved with numerous joint operations with other agencies and combined operations with foreign military and police organizations. We support source country counter-drug initiatives being conducted in key countries with interdiction aircraft and riverine law enforcement training teams.

Coast Guard Law Enforcement Detachments deploy on United States Navy ships as well as British and Dutch warships. We exercise bilateral maritime agreements and conduct an aggressive maritime training program to help other nations become more effective partners and enable them to assume greater responsibilities for multi-mission operations. You heard Admiral Ellis refer to the Caribbean Initiative. Currently we have twenty bilateral agreements with Caribbean nations to help counter the threat of NARCO traffickers, but our cooperation is not limited solely to the Caribbean. It may surprise some of you to know that fisheries enforcement officials from the People's Republic of China routinely sail with Coast Guard ships in the Pacific to help enforce the United Nation's ban on high seas drift netting. In the Bering Sea, we conduct joint patrols with the Russian Border Guard, and have even developed a joint operating manual for our two services to work together. We can leverage our international partnerships by extending our operations as we work together to extend our operational reach to counter mutual threats, and exploit opportunities to everyone's advantage.

Figure 4. Broad Operational Reach



To meet our mutual goals for maritime security, we need to cooperate across the spectrum of diplomatic, humanitarian, military, and law enforcement actions [Figure 4]. It is critical for operators to cooperate, but first the diplomats must lay the foundation. Diplomatic cooperation is an essential building block for effective maritime security. Entering into international conventions is the initial step nations usually take when they recognize the need to cooperate.

Most of us are party to a variety of international conventions critical to maritime security, including the United Nations ban on high seas drift net fishing, the 1988 Vienna Convention on Drug Trafficking, and the IMO Maritime Search and Rescue Convention. With a firm diplomatic foundation in place, we can significantly enhance international maritime security through humanitarian assistance and military cooperation. Regular combined exercises provide the tools for interoperability, coordination and sustainability. These important tools then can be used for effective combined operations or rescue efforts, a necessary component of maritime security.

A major element of international cooperation is law enforcement—an area where the Coast Guard plays a prominent role. Figure 5 illustrates the fact that we conduct a large number of boardings in international waters. This raises the stakes

Figure 5. The Coast Guard's Role

➤ Enforcement of Laws & Treaties

➤ Over 2,500 Ship Boardings in International Waters in a Four-year Period

- In Addition to Boardings within U.S. Territorial Waters
- Drug Interdiction
- Illegal Migrant Interdiction
- Enforcement of U.S. & International Fisheries and Marine Resource Protection Regulations



for would be smugglers or international law breakers who must range farther and farther from our shores to avoid our reach. By routinely exercising bilateral agreements and pursuing boarding on the high seas, we also decrease the likelihood of smugglers violating other nation's sovereignty as well as our own. If we do it well—well enough—the routes become unprofitable and the smugglers go elsewhere or, preferably, go out of business.

As allies and friends we are deeply committed to insuring our mutual national maritime securities. The challenges and threats we face are huge. They may even appear overwhelming at times. That is why I believe cooperation is absolutely

essential both on a bilateral and a multilateral basis. We look into the next century with some apprehension and uncertainty. But we must recognize that operations within a framework of international law are vitally important to us all. Flexible and systematic operations are essential for success against those who seek to illegally exploit any nation's sovereign waters and air space. No single country has the where with all to stop or deter all legal maritime challenges that face them. However, if together we focus our law enforcement resources to the best effectiveness and seek maximum cooperation, I am convinced we will deny the criminals the advantages that they seek. Simultaneous operations across all mission areas, including marine environmental protection, marine safety, and port security will insure regional and national maritime security. When maritime security is achieved, sovereignty is enhanced, and our community of nations is the better for it. We have much to gain through increased cooperation despite the difficulties of history, culture and politics. Forums such as this International Sea Power Symposium help break down the barriers to cooperation and enable us to build a future together. Bilaterally, if we must, multilaterally wherever and whenever possible. Thank you.

Admiral Ellis:

Thank you Ray. We've painted across the spectrum of maritime issues with a fairly broad brush over this last hour. While you're queuing up at the microphones for your questions as I know you will, I'd like to touch briefly on a subject I talked about—Freedom of Navigation both in terms of its origin and its importance and also the challenges associated both with its preservation and denial.

Admiral Matias talked very compellingly about the chronology of progress we've made in terms of the importance of the oceans, where we are now, and what the enticing future might look like as it becomes even more important. And he spoke of a maritime civilization which blends nicely with Admiral Johnson's discussion of a maritime century.

Admiral Jaureguay addressed, very significantly I think, the challenges confronted in all of us in terms of environmental protection, and the growth, and the challenges that we see proliferating around the globe. He talked about high seas threats that we are now facing in addition to the coastal threats that we have considered in the past. He also discussed the importance of balancing sustainable growth with the realities that we have to address in terms of environmental protection for our children.

Finally, Admiral Riutta discussed the thing that we find at the core of all of our maritime efforts, and that's the rule of law. The fact that there has to be agreement across the full spectrum of access and enforcement. The fundamental thing that the rule of law provides is a stable environment which then implies a safe environment which does so much to foster economic prosperity for us all. He then noted some of the unique capabilities of the Coast Guard to address these challenges. So that's the spectrum of issues we touched on. I'd be pleased to take any questions and direct them to the panelist that you choose. Yes sir.

Q. I am Admiral Aranchibia, Commander in Chief, Chilean Navy. I don't have a specific question, but I would like to make a statement. We all share the concept and agree that Freedom of Navigation, protection of maritime resources and

protection of the environment are essential, but we all face a reduction in our budgets. That means that we have not sufficiently or efficiently transmitted our message to the taxpayers or to our Government. In the future, we should share our ideas and our experiences in conveying this message to our government and taxpayers. Effective communication will be necessary to obtain what is needed to do what we think we must do in dealing with the important topics we have discussed today. This issue should be one of the agenda topics for a future meeting such as the one we are having now. Thank you very much.

Admiral Ellis:

Thank you Admiral Aranchibia. I don't think there is anyone in this room that would disagree with that effort—that point. And it's something that we all need to be reminded of. Forums such as this are unique in our ability to get together and talk amongst ourselves, colleagues and all, about the challenges that confront us. But there is a greater audience that must be addressed, and must be made increasingly aware, as I think they are, of the contributions that each of your services make to what is now becoming increasingly important. This point was highlighted by Admiral Matias in his discussion of the roles of the oceans and their importance to each of our nations individually and collectively. An important message there—thank you. Any other questions? Again, I'd like to thank all the panelists for joining me up here this morning, and thank you for your interest and attention.

Maritime Forces' Unique Contribution to World Security

Panel Discussion

- *Peacetime Presence: Admiral Boyce, First Sea Lord and Chief of the Naval Staff, United Kingdom*
- *Contingency Response: Chief of the Royal Australian Navy, Vice Admiral Shackleton, Australia*
- *Combined Operations: Vice Admiral Van Duyvendijk, Commander in Chief, Royal Netherlands Navy, Netherlands*
- *Humanitarian Operations: Lieutenant General Rhodes, Commanding General, Marine Corps Combat Development Command, USMC*

Vice Admiral Cebrowski:

Our second panel for this morning will address our maritime forces' unique contribution to world security. This panel will be moderated by Admiral Sir Michael Boyce, the First Sea Lord and Chief of Naval Staff. In his thirty-eighth year of service to his country, Admiral Boyce has had a number of at-sea commands, including Her Majesty's Submarines *Operon*, *Opossum*, and *Superb* and the Frigate HMS *Brilliant*. He has also served ashore in various staff, training, and command positions in the Ministry of Defence and NATO. Prior to becoming First Sea Lord, Admiral Boyce simultaneously held the positions of Commander in Chief Fleet, NATO Commander in Chief Eastern Atlantic, and Commander, Allied Naval Force Northwestern Europe. He has served in his current position since October 1998. Admiral Boyce.

Admiral Boyce:

Thank you very much indeed. Admiral Johnson, ladies and gentlemen, well I am delighted to have been asked to introduce this the second panel discussion, where we will be looking at the unique contribution that maritime forces can make to world security. This will be done by examining four subject areas, identified in your programs.

But before we start off, may I just introduce the remainder of the panel. On my left, Admiral David Shackleton, Chief of the Naval Staff of the Royal Australian Navy. Admiral Shackleton is a Warfare Officer with combat system and aircraft direction expertise. He has had a number of commands. He is a particular expert in the area of operation requirements and especially in the area of combat and command and support systems. He has been Director General of Naval Policy of Warfare and also Director General of Command and Support Systems. And before

becoming the Chief of the Navy in July this year, he was the head of capability development. He is going to be speaking on contingency responses, and his background in his country makes him admirably suited for this.

Next, Admiral Van Duyvendijk, the Commander in Chief of the Royal Netherlands Navy, another Warfare Officer with deep, specialized knowledge in anti-submarine warfare (ASW). Again, he has had various seaborne commands, wide international experience, was Chief of International Planning Affairs and the Central Defense Staff, was Deputy Commander in Chief of the Netherlands Navy, and was also the Deputy Commander in Chief to Commander in Chief Eastern Atlantic. Admiral Van Duyvendijk became Commander in Chief of the Royal Netherlands Navy in 1998, and his background involvement with international forces suit him very well to cover combined operations.

Finally, Lieutenant General John Rhodes, the Commanding General, Marine Corps Combat Development Command, at Quantico, Virginia. He is an aviator with a rotary and fixed-wing background, a wide variety of commands, and vast experience, including being in command of one of the large units in Desert Storm. He has also been Deputy Commander of the Marine Corps Forces Atlantic. General Rhodes took up his job as the Commanding General of the Marine Corps Combat Development Command, Quantico, a couple of years ago, and his considerable experience suits him very well to speak about humanitarian operations. Myself, I will lead on peacetime presence. But before I do so, I thought I might just look for a moment at the subject title for this session—Maritime Forces' Unique Contribution to World Security.

From all that we have heard from Admiral Johnson and from our other speakers in the last day and a half, I know that no one will disagree with me that security can no longer be viewed in the narrow and clearly defined terms of a few years ago. In our rapidly changing strategic environment, a much broader definition is required. For not only do we need to address environmental and humanitarian issues—and the last panel made that very clear—but we also have to face up to the proliferation of new risks and challenges. Amongst these, of course, are the asymmetric threats that will occur as potential opponents seek to avoid strength and to engage weakness.

Also, as we have heard—and we all know very well—we face a much more complex and inherently unstable world in which very real examples of risks and threats proliferate. Bosnia and Kosovo vividly demonstrate that instability as a result of nationalism, extremism, and ethnic rivalry can develop into a major conflict involving many nations. And such instability can also be exacerbated by competition for scarce resources, often leading to massive human suffering. Furthermore, there is an increasing danger of the proliferation of weapons of mass destruction that might threaten neighboring states, global economic interests, and even international stability. And as a final observation, there are the social challenges, such as those presented by drug trafficking, organized crime, and uncontrolled migration. All of this takes place in a geo-strategic setting that we loosely refer to as "peace."

The corollary of this wide spectrum of instability is that there is a real opportunity for those of us in the maritime business to offer our politicians some unique tools to counter some of the problems that the world faces. However, we really do need to articulate what it is that only maritime forces can bring to today's security

problems, because the boundaries between various levels of operations have become somewhat blurred. There may be very significant levels of threat when we engage in what we would refer to as peacetime activities. As Admiral Johnson said yesterday, the qualities of flexibility, mobility, poise, and reach that are the inherent strengths and features of maritime forces are really eminently suited to addressing the types of problems that occur in this confusing and challenging security environment.

With that as a background, let me now pick up my subject heading, and that is maritime presence. Maritime presence offers a well-proven method of bringing naval diplomacy to bear on international politics. Presence has been traditionally provided in its most simple and its most agreeable form by foreign port visits, with the ship and her company acting as ambassadors and making a favorable impression on the local population. Warships are unique in their ability to make this sort of impact, and this logic can of course be extended. Not surprisingly, the value of forward presence has been long accepted in NATO, whether it is symbolic or real coercion. The mere presence of a naval vessel provides an example of national alliance or coalition commitment.

A maritime unit or force can also be used in a precautionary or a preemptive way. A tailored force operating under carefully crafted rules of engagement, poised in theatre for subsequent use when political objectives have been refined, offers a real capability that no other forces can match, and hopefully such presence will prevent crises from occurring. But if not, the force can transition without significant effort, and without necessarily sending overt signals, from a peaceful posture to a more proactive stance. Again, this reinforces the point made yesterday by Admiral Johnson. Readily available maritime forces allow us to act as a force for good. By ensuring that presence is meaningfully credible, we can provide a deterrent influence and help to nip crises in the bud.

In that sense, it is the very scope and subtlety of the operational choice that allows navies to offer our politicians such unique choices: maritime forces configured in a way that makes it quite clear what message we wish to give. We may deploy, withdraw, and re-deploy simply by exercising freedom of navigation in international waters. The important piece we heard from Admiral Ellis earlier on underlines this. That message might of course be entirely benign, such as humanitarian operations or confidence building. Alternatively, a more coercive message might be signaled, such as a demonstration of intent in support of diplomatic negotiations. A couple of examples spring to mind: In response to the deteriorating situation in Serbia earlier in this year, one of our Royal Navy ships deployed off the coast of that country in support of the democratically elected government, and some noticed that the United States naval forces provided the lead in restoring civil rule to Haiti following a significant naval presence off shore for many weeks.

We see in many areas where the presence of naval forces can assist in reinforcing territorial claims, again as the last panel addressed. The natural resources in the sea are practically boundless. As a result, all navies conduct patrols in territorial waters and in exclusive economic zones to some degree. However, presence in this sense will have a particular significance in disputed areas. The Spratlys and Paracels are obvious examples whereby competing claims are underpinned by naval presence—although I suppose a cynic might argue that the very presence of competing forces

sometimes helps prolong the dispute. And on a somewhat greater scale, the various preemptive maritime deployments in the Arabian Gulf remind the Iraqi regime of continuous Western involvement and implications of aggressive action whether or not the allies have access to land bases. Such examples demonstrate how maritime forces provide decisionmakers, whether national, alliance, or coalition, with a wide range of choice prior to any formal military engagement, without the need to make a decisive or an irrevocable commitment into theatre.

But further to all this, the increasing reach and capabilities of maritime forces in the littorals will serve to accentuate these "presence" attributes as they continue to affect events, not just at sea, but also on land at even greater distances. The use or threat of use of organic aircraft, stand-off precision strike weapons, and landing forces, for example, will allow the influence of naval presence to be brought to bear well inland rather than just on a narrow coastal strip, and certainly well inland to the distance mentioned in the last panel, where about 70 percent of the world's population reside. A large coalition force with amphibious and strike capability can achieve a great deal. From a sea base: transport, mounting bases, airfields, stores support, hospitals, refuge havens, and, if necessary, limited war fighting capability can be established without infringing sovereignty. Such a force is able to deploy quickly and is logistically self-sustaining over very long distances.

Such an approach can reduce the heavy pressure on fragile national infrastructures, such as that inflicted on Macedonia and Albania during the Kosovo crisis. And most important of all—now this is worth repeating—such a force, of course, does not have to commit. It is this flexibility, and the ability to provide presence without occupation that signifies the truly unique aspect of a maritime contribution, because the use of the sea as a medium avoids the need to contravene national boundaries, and we are all aware how every day this becomes more of a problem when trying to negotiate host nations' support for overflying rights—the "Red Carpet" problem.

It is to provide for depth of our navies that drives us to design and equip them with the most modern weapons systems, sensors, and communications. The reason for depth is of course to fight wars in the end analysis. But this depth is important in peace too since it is possible for one's own forces to be involved in peacetime presence activities at the same time third party belligerents are conducting their own warlike activities. Maritime units showing presence must, therefore, be prepared and equipped to counter deliberate or accidental hostile acts as well as engage in full-scale warfare.

In order to be able to achieve the joint and combined activities so necessary for high intensity operations, they must be practiced in peace. And this serves other extremely important purposes as well. Firstly, the activities conducted together in peacetime should serve to create confidence, especially between navies not necessarily bound together in formal alliance, in the manner that NATO is, for example. Secondly, it will also help to improve the level of interoperability that is so necessary for success in modern operations, as Admiral Johnson made very clear yesterday. Thirdly, an important aspect of peacetime presence is that navies need the opportunity to operate and become familiar with areas in which they may be required to fight and operate. Finally, of course, presence in the context that we are

discussing can only be effective if the ship or the force is seen and known not to be just a paper tiger.

So peacetime presence is something we will want to exercise across the full spectrum of environments, from the benign to the high risk. It might help if I just illustrate this with some more examples about peacetime operations that might be called upon. Such missions as humanitarian and disaster relief—for example, the Honduran and Nicaraguan devastation caused by Hurricane Mitch in 1998 was alleviated in the early stages by British and Dutch forces providing invaluable assistance. The availability of such a force, which was in the area exerting presence, made it easy for them to be rapidly diverted from their normal tasks and admirably proved the humanitarian assistance capability of maritime platforms.

Moving up the scale, consistently, units demonstrate the utility of highly capable command and control platforms operating on the high seas utilizing force where necessary. We heard from our previous panel and from Admiral Loy about counter-drug operations. Earlier this year one of our Royal Navy ships was engaged in such activities with the U.S. Coast Guard and West Indian authorities and recovered very large quantities of illegal drugs. Other examples of constructive duties include enforcement of embargoes and economic sanctions, quarantine enforcement, and interdiction of illegal immigrants—dealing with the problems of Vietnamese boat people in the 1980s or the Cuban and Haitian refugees in the 1990s. The multinational interdiction operations described by Admiral Moore yesterday in the Gulf to reduce illegal oil smuggling are excellent and current examples of maritime forces underpinning United Nations peace enforcement objectives.

In addition, we may wish to add such activities as non-combatant evacuation operations, especially in semi-permissive or non-permissive environments. The Italian-led mission to conduct an evacuation from Albania in 1997 with a wide variety of supporting nations is a good example of that. Naval force used in support of diplomacy, peace support operations, and the protection of maritime trade, such as the protection of oil tankers during the period of the Iran-Iraq War, provide further case studies.

I think I have given plenty of examples, ladies and gentlemen, and certainly my time is now up. I hope in the last few minutes I have illustrated the unique contribution by way of presence that maritime forces can make to world security. Two key issues emerge: (1) How do we sell this to our politicians? and (2) In particular, picking up the point made so sensibly by Admiral Aranchibia, how do we get the funding for the important role that we can play in global security? In that regard perhaps we ought to find my second point, that is a more dynamic phrase than peacetime presence to describe what we do. Perhaps we can explore these issues further in discussion. I now hand over to Admiral Shackleton, who will speak about contingency responses.

Admiral Shackleton:

Thank you, Sir Michael. I looked at the languages on the board, and I could not find where I selected Australian. So can I just speak for a few minutes while you tune your ears. I too would like to give my thanks for being present here at this

Symposium. I would like to especially thank Admiral Johnson for giving me a chance to have a port visit, and I will probably leave it the same way that Sir Michael does.

I am going to talk about contingency response in a moment. But first I would like to tell you that the remarks in my presentation are colored by our current experience in East Timor, where we have at the last count about thirty-three nations and nine navies operating together in a coalition to return that country back to a sensible state. I think a lot of the experience that we have gained over the years in participating in coalitions led by others has given us a number of insights and experiences, but can I say that our experience in doing this operation so far this year has been on a different level. We have achieved much, but it is also fair to say that we have learned a lot. So I can say that I will talk about contingency response, and that is where I will start.

My belief is that the key element of maritime forces and their ability to respond to practically any sort of contingency is their immediacy. And that was talked about this morning as well. The American Presidential query "Where are the carriers?" is a call that is being made about naval forces by many of the governments seeking to make a rapid and credible response to an unexpected emergency on more than one occasion. An emergency may be halfway around the world and have arisen with little or no warning but nevertheless involves vital national and international interests.

Immediacy does not come about by accident; it depends in turn upon preparedness. Maritime forces cannot be deployed with little or no notice unless they are ready, and that readiness does not occur by accident. Nor do the other characteristics of maritime forces that we consider being the greatest assets. These are survivability, mobility, reach, and poise, as Sir Michael used the term. But perhaps an alternative would be persistence. So could we just look at these concepts in the context of preparedness for a few minutes?

Survivability—it is important that we can configure combatants large or small so that they are capable of defending themselves and making a credible contribution to whatever force they are assigned. In the Australian Navy, we have moved very firmly away from ideas of "fitted for but not with." We must be ready to come as we are wherever we are needed.

Concerning mobility, reach, and persistence, I will discuss these together because they do demand very much the same efforts for their achievement. We need to have maritime forces that are capable of rapid deployment, capable of operating long distances, and capable of sustaining that deployment in both operational and logistic terms for extended periods. There is considerable congruency with Sir Michael's statements and my own comments here. Mobility, reach, and persistence—and this is why I think the persistence is a particularly useful term, because it carries the connotation of keeping on at the task which is very much a characteristic of naval forces.

In a difficult situation, navies are often the only thing that gives governments time to think about how to control the events for the longer term. For smaller navies wishing to develop contingency response capabilities, this may mean combatants that achieve economies of scale in their own construction. It is good to see that naval authorities are moving away from connecting size with expense, largely because we always attempted to cram the maximum possible weapons and sensors

into a given hold. Some of the advantages conferred by the sheer size of a ship are that bigger hulls result in a ship that can go further, stay underway longer, and probably have much greater endurance in terms of ammunition and stores. They are also cheaper to modify and modernize. Also, we must recognize the force multiplier of organic replenishment units. Even the simplest underway tanker can increase the on-station endurance of a small force by an order of magnitude. This results in an enormous increase in the contribution that that force represents within the whole. In addition, we need to have logistics systems that will allow units to be sustained during distant deployments and which have the flexibility to operate in unusual and difficult circumstances. These characteristics should be implicit in maritime forces.

Next, I will look at some other characteristics that can only be achieved by consistent and constant effort, all of which go towards that elusive capability of interoperability that we must achieve. My suggestion would be that we continue as we have started. The whole experience of Western navies over the years of the Cold War was one of working together. This theme has been extended even more widely in the international operations that have taken place over the last decade. We need to emphasize doctrine, communications, and training, for it is all three of these together that bring real meaning to the sometimes overworked term of connectivity.

True connectivity can only be achieved by the careful combination of theoretical and practical effort. To a considerable degree, maritime forces already enjoy a remarkable commonality of tactical doctrine. The EXTAC 1000 Series have taken many elements of this doctrine and put them into the wider international arena where all navies can access them, but such work needs to go further if we are to have the capacity to respond not only rapidly but also effectively to contingencies. I see three aspects being critical to naval forces in this regard. The first—and the major theme of this Symposium—is developing a common international approach to and framework for the rules of engagement. I do not see this as restricting sovereignty or the ability of governments to decide the employment of their national forces. Rather, improving our mutual understanding of what rules of engagement mean and how they operate must do much to allow our coalitions to put rules of engagement in place which meet both the needs of the particular operation and those of the nations involved. If such rules of engagement cannot be signed off by each sovereign state, they may ultimately prove to be a showstopper for the successful formation of a coalition. Compromises may be necessary, with some nations accepting a front line role and others perhaps adopting a supporting role. We need to develop mechanisms that will permit the rapid development and negotiation and probably re-negotiation of rules of engagement. This is a problem that must be faced if immediacy is the main issue, as speedy deployment of maritime forces without an agreed framework for their employment is impossible.

Additionally, communications need constant attention. We all have to develop a realistic assessment of the level and capacity of the communication systems required of our national maritime forces in a multinational environment. This is especially important in order to maximize their combat potential and the contributions that they might make to operations. This is not something that can be done without working with likely partners on equipment and procedural compatibility. We all must realize that one size does not fit all; particularly in communication

systems. We must also examine new ways of linking up with others. In particular, we need to remember that coalition operations do not reduce national requirements for anybody. This can put enormous strains on the communication systems of ships deployed into the operational area as a nation's commitment to the coalition. Not only must they talk to the international force, but they need to talk back to home plate, sometimes at the highest levels. Catering for this situation will be a real challenge for the major partners in coalitions. They may be required to facilitate the national communications of smaller navies; accepting, for example, that someone's encrypted traffic is sent over their own circuits.

This issue leads me directly to what I see as the major challenge for many network centric warfare ideas in multinational operations. Without recognition of multinational requirements, network centric warfare and coalitions will not work. There are two aspects to this problem.

The first is a physical one: equipment and bandwidth. Very few prospective partners will ever be able to match the capabilities of units like the USS *Coronado*, the U.S. Third Fleet flagship. So we need to find ways to see that all concerned get what they need. My postulation of future operations is of a set of linking nets each configured to meet the particular needs of the participating nations. There will be a need at some time for larger navies to be able to reach down from their high-capacity nets while smaller navies reach up.

But there is a second and potentially more difficult issue, one of releasability. It is one thing to protect sensitive national information; it is another to create an environment in which there are haves and have-nots in terms of access to information, where some nations are only present to make up the numbers. Sovereign states will not go into a coalition if it is merely an exercise in political tokenism. Token efforts and token involvement will soon be seen for what they are. This does not mean that everybody needs to know everything. It means that they need to know enough to make the maximum contribution of which they are capable. In some cases, it's the smaller nations which themselves are not passing information to their bigger partners—this is not a comment about the U.S. passing information down the line. The point I am trying to make is, everybody has to be willing to share information.

Now coming into this situation introduces some difficult problems such as access to each other's national planning processes. This, for example, may require systematic preparation procedures for sanitation of material. Also it means that we need to think about the degree of needed access to make the best use of all of the capabilities each nation can bring to the coalition in terms of people, platforms, and systems. And this process cannot be the preserve of just one or a few nations if it is to have any legitimacy. If there is to be any reality in the concept of immediacy, these arrangements must be planned ahead. They must be worked out, practiced, and proven.

This brings me finally to training—a point made and reemphasized in the last few days. Our experience of the last decade and the one before is that there have been very direct connections between the large multinational exercises and occasional passage exercises and the ability of Australian naval forces to integrate effectively into contingency operations. Sometimes ships have deployed directly from a major exercise to a contingency. The obvious lesson is that these exercises do matter, both in direct and indirect effects. In addition to ship exercises, all sorts

of desktop training exercises and games and even seminars and conferences all contribute a great deal to producing personnel who are prepared to operate in a multinational environment and are at ease with the issues.

I would like to close by emphasizing my theme again: contingency response capabilities do not exist by accident. While some very definitely derive from the inherent nature of capable maritime forces, very many more come from consistent effort, goodwill, and, as always, attention to detail. Above all, these capabilities will only be achieved by navies and nations working together. All of these attributes have been characteristic of what naval forces have achieved over many years.

Thank you, and I look forward to participating in discussion afterwards.

Admiral Boyce:

Thank you very much, David. Admiral Van Duyvendijk will now speak to us about combined operations.

Admiral Van Duyvendijk:

Admiral Johnson, ladies and gentlemen, in his presentation, Admiral Boyce has discussed the unique contribution that maritime forces can make to support global stability and security in response to the wide spectrum of risks and threats that we are faced with today and in the foreseeable future. Allow me to focus on the aspect of combined maritime operations from a Dutch perspective—a perspective, I believe, which is not exclusive, as I have no doubt that the content of this short presentation is applicable to a number of seafaring nations with a military maritime component.

Figure 1. Combined Operations

- › Necessity of combined operations
 - › Requirements for effective cooperation
 - › Applications
-

I would like to touch on two areas and conclude with an example how these areas apply or are being made applicable to the Royal Netherlands Navy. The overall aim of this short presentation is to provoke some thought on how combined operations could be enhanced or improved in a more global context. Figure 1 summarizes the areas I will discuss during my presentation.

Figure 2. Necessity of Combined Operations

- › Political realities
 - › Size of operations vice available means
 - › Sustainability
 - › Burden sharing
-

Figure 2 summarizes why combined maritime operations are necessary. Nine out of ten nations are bordering on water and are to a varying extent economically dependent on this medium. A number of these nations have an open economy and are in that respect dependent on a stable security situation. The next logical step is, therefore, to contribute to the creation or maintenance of the stable situation. The size of the contribution to as well as the possibility of participation in operations by nations is largely dependent on the ambition level of national foreign policy, economic and moral factors, and the availability of military resources. The armed forces of a nation ideally should provide a government with as many options as possible for participation in crisis response and conflict prevention operations if they so choose.

I do not think I will offend too many nations represented here today when I say that only a few—a very few—nations have the capabilities to unilaterally conduct the whole range of maritime missions and tasks for a sustained period of time. For all the others, combined operations appear to be the only viable option to contribute. However, the political reality and objectives within the international community very often demand combined operations anyway. Therefore, it appears to me that, given the political considerations, most nations—even those who have the capabilities to conduct operations independently—will prefer to participate in international coalitions for the entire scope of maritime operations.

An important issue to consider is the size and duration of operations [Figure 3]. For instance, NATO estimates that large-scale crisis response operations of an expeditionary nature might have to be sustained for a period of at least two years

Figure 3. Characteristics of Maritime Operations

- › Classical warfare areas
 - Open ocean
 - Littorals
- › Crisis response operations
 - Aid/relief operations to peace enforcing operations
- › Expeditionary (worldwide)
- › Short notice
- › Self-sustainable

using a force rotation schedule of six months. As I mentioned before, few nations have the forces to do this by themselves. One of the possibilities to overcome this situation will be to have nations share the burden by providing operational units and personnel for a specific combined operation. I wholeheartedly agree with Admiral Moore when he stated yesterday that there is a job for everyone in combined operations.

In addition to classical areas of warfare, we nowadays face extended maritime missions and tasks, often in the littorals in support of amphibious and land

operations. Operations are often expeditionary in nature, and can be called for on short notice. Contributions of participating nations in these operations consist of forward deployed or rapidly deployable forces. These forces should be self-sustaining and tailored to achieve the objective decided upon at the political level. Maritime forces are inherently well suited to expeditionary operations. Their reach, ability to sustain themselves without reliance on host nation support, mobility, and flexibility are invaluable attributes.

A joint maritime force often offers the opportunity for early and timely intervention in a potential crisis. This was dramatically demonstrated during recent operations in the Arabian Gulf, the Adriatic, and presently in East Timor. In almost every type of operation, maritime forces can be used to interdict, project power, isolate, and deliver ground forces and equipment from the sea. Also they can make a vital contribution to humanitarian and disaster relief operations, as we recently saw in Eritrea where a frigate evacuated a number of refugees. In Honduras, the British and Netherlands maritime forces provided support in the aftermath of the Hurricane Mitch, as Admiral Boyce already alluded to. What maritime forces can do in the field of law enforcement such as counter-drug operations has already been intensively covered.

Participation in maritime operations calls for modules or building blocks that are flexible in size and composition, and that are easy to integrate into larger forces. In my view, these national or preplanned and pretrained multinational modules should be balanced and able to conduct independent tasks and bring varying degrees of capabilities to the theater, ranging from support for humanitarian aid to force projection capabilities. This could range, for instance, from a task force with limited strategic lift capability which is self supporting for a prolonged period of time and able to participate worldwide in conflict prevention and crisis response operations, to specialized task forces for specific missions.

A key requirement for combined operations is effective cooperation [Figure 4]. As such, the level of success in achieving a mission or task is dependent on the level of interoperability between participating forces and headquarters. To that effect, it is necessary to define common grounds to achieve that interoperability.

Figure 4. Requirements for Effective Cooperation

- **Interoperability**
 - ✓ Common doctrine
 - ✓ Common procedures
 - ✓ (minimum) Common standards
 - ✓ Common language
 - ✓ Connectivity
 - ✓ Common (combined) training
 - **Practicalities of regional cooperations**
-

NATO as an organization has been and still is instrumental in providing common maritime doctrine and procedures that are being regularly exercised, evaluated, and updated by its members. In numerous bilateral and multilateral cooperation programs, for example the Partnership for Peace Initiative, parts of the doctrine and procedures are shared with a number of nations that in turn enable easier participation and integration of these nations in combined operations with NATO. I believe this broadening of doctrine and procedures is of the utmost importance in achieving our goals.

Another important factor is to detail common standards that units should possess in order to support nations in defining their requirements and achieve interoperability. It goes without saying that being able to communicate in a broader sense of the word is a necessity for combined operations. Apart from a common language, we need connectivity. Again, within the NATO community, common standards have been detailed that in my opinion would greatly benefit combined operations if these standards could be more widely spread. Furthermore, common training standards should provide individual nations with guidelines on structure and the type of training needed to achieve a certain operational standard which would enable a quick integration of forces into a larger formation.

In my view a practical and pragmatic approach for achieving interoperability is regional cooperation in which all aspects of interoperability can be easily discussed, developed, and practiced with neighboring nations. The regional cooperation rules will enhance the possibilities for the creation of larger combined modules or building blocks for a maritime force and eventually will increase regional stability as well.

Allow me to use the Netherlands as an example on how these ideas can apply at

Figure 5. Applications-A Dutch Perspective

National political ambition:

- Requirement to participate in Conflict Prevention and Crisis Response Operations
- Participation always in international coalitions
- Modular concept for combined operations
- Expeditionary model:
 - ✓ High readiness of forces
 - ✓ Flexibility
 - ✓ Mobility

the political and military level [Figure 5]. First of all, in the context of conflict prevention and crisis response operations, the Netherlands will only operate in international coalitions. This is a political given in the Netherlands. The Netherlands will, in principle, participate with balanced modules that are easy to integrate as building blocks in larger international formations. Given this political ambition and available resources, an expeditionary module provides for optimum use of our assets. This means modules with high readiness that are flexible in size and capabilities can be used worldwide. They will have the necessary means for strategic lift

and are self-sustaining. As I mentioned before, a number of nations use similar structures for maritime forces.

I would now like to provide you with an overview of how this has been implemented in a practical and a pragmatic way [Figure 6]. First, the Netherlands and Belgium Navy are operationally integrated. The largest combined module consists

Figure 6. Applications-A Dutch Perspective

Present integration and cooperation:

Belgian/Netherlands Task Group (incl. amphibious lift)
 (Battalion level)
 UK/NL Amphibious Task Group
 (Brigade level)
 Striking Fleet Atlantic
 (Division level)

of the Belgium/Netherlands task group with a strategic lift capability at the battalion level. This group is self-sustained and fulfills a national ambition. Second, together with the United Kingdom, the UK/NL amphibious force was formed over twenty-five years ago. The Belgium/Netherlands task group I just mentioned is an integral part of this force. This brigade-level amphibious group with escorting forces regularly train together; has a high level of readiness, interoperability; is worldwide deployable; and covers a regional European need.

Finally, the UK/Netherlands amphibious force is a integral part of the Striking Fleet Atlantic, a division-plus-sized amphibious task force with escorting as well as enabling forces. Commander, Striking Fleet Atlantic is also the sea-based combined joint task force commander in NATO who, as such, is capable of conducting and directing corps-size combined and joint operations.

Finally, I will briefly touch upon some developments in the area of combined maritime operations in Europe. As part of the European Security and Defence Initiative, a European multinational maritime forces concept is in its final stages of development. The aim of this concept is the planning and conduct of combined maritime operations under the direction of the European Union or Western European Union, making use of the integrated military structure of NATO. With the advantages of regional cooperation in mind, a pragmatic and practical way to allocate forces to this concept would be to use existing European entities like the UK/NL, multinational and national task groups, as well as specialized regional modules. This in turn can, as a regional building block, join up with other similar regional modules, NATO, or larger combined formations. And again, there is not only a job for everyone; no, I believe there is a need for everyone to fill a job.

In conclusion, providing certain criteria are met, it is my belief that the use of combined maritime forces is essential and could be a force multiplier in achieving the political objectives when executing crisis response and conflict prevention operations.

Admiral Boyce:

Lieutenant General Rhodes will speak to us on humanitarian operations.

Lieutenant General Rhodes:

Admiral Johnson, fellow delegates, good morning. It is my particular pleasure to participate in this very important International Sea Power Symposium. I have been asked to provide a few thoughts on the future security environment we see and some of the challenges that are facing our naval forces—more specifically, to discuss humanitarian assistance operations.

What I intend to do is to discuss briefly some of the actual humanitarian assistance operations that our naval forces have conducted around the world from the sea. Then as I discuss these, you will see some common trends . . . some common threads. Finally, I will conclude by summarizing some of these common themes, common trends, and perhaps identify some unique capabilities that our naval forces can provide for future humanitarian assistance operations.

As with all of your naval forces, in the past ten years we have undertaken an increasing number of crisis response missions. Our naval forces during the Cold War period were busy around the world responding to a crisis about once every fifteen weeks. During the period 1991 to 1997, we responded on the average about once every five weeks. In 1998, we responded on the average of once every three weeks. Now we see this increased use of naval forces continuing. Our naval forces will be called upon not only more frequently but also on more of a wider variety of missions and operations.

Many of these missions and operations will be humanitarian assistance operations. One of the humanitarian assistance operations that our naval forces participated in and that I would like to discuss is Operation Sea Angel in Bangladesh in May and June of 1991. The forces involved were the Fifth Marine Expeditionary Brigade of Amphibious Group Three. Their mission was to provide humanitarian relief, principally food, water, and medical supplies, to four major regional areas, as well as set up numerous fresh water sites in the wake of a tropical cyclone.

Our forces, the same forces that participated in Desert Storm and flew over eleven hundred sorties by helicopter, provided assistance to the outlying areas in Bangladesh and distributed over seven hundred tons of food, medicine, and construction materials. At the same time, the Naval Service Forces used waterways to deliver over one thousand four hundred tons of relief supplies and over two hundred and fifty thousand gallons of water to the civilian populations in distress.

The next operation I would like to discuss was Operation Restore Hope in Somalia from December 1992 to May of 1993—a little bit different situation here. The Fifteenth Marine Expeditionary Unit was embarked aboard the *Tripoli* Amphibious Ready Group and supported by the ships of the *Ranger* Carrier Battle Group. In December our forces moved ashore to secure the ports and the airfields so that we could then provide the humanitarian assistance. In addition to providing security, we also provided quite a bit of food and water at the distribution points as well as convoy support. At the same time, our maritime prepositioned forces were brought ashore and offloaded, again using the same Sailors and Marines from our prepositioned forward-deployed forces.

The next operation I would like to discuss is Fundamental Relief, which occurred in Puerto Rico from September to October 1998. In this case, we had a special Marine Corps Air/Ground Task Force located aboard the USS *Bataan* and USNS *Algoi*. The mission was to provide humanitarian relief in the wake of a hurricane. In addition to doing the normal distribution of food, water, and medical supplies to local communities, we had engineer units that went ashore that built five medium girder bridges to help restore the transportation infrastructure in local areas. We provided mobile electric power to the outlying areas and, again, we set up fresh water sites and basically provided over a hundred thousand gallons of water. Additionally, we provided emergency medical treatment and public health support. The forces were transported ashore from the amphibious ready group, or I should say from the ship—the *Bataan*—and the helos embarked aboard, forces and aid were able to reach into those areas that were inaccessible by any other means.

The last example I would like to use is Operation Avid Response in Izmit, Turkey, following a devastating earthquake. The forces involved were the 26th Marine Expeditionary Unit (MEU) aboard the USS *Kearsarge* Amphibious Ready Group. These were the same forces that provided support to the Kosovo and Shining Hope operations. During Kosovo they provided the initial peacekeeping ground forces, and in Shining Hope they helped construct and provide security for the refugee camps. They completed those missions, back-loaded aboard our ships, and then the earthquake occurred. Within four days, they were the first forces off the devastated area of Turkey. Their mission was to provide earthquake assistance and humanitarian disaster relief in coordination with the Turkish government. We used our helicopters to establish medevac capability from the outlying areas to three major regional areas, and we provided relief supplies of water, food, generators, and medical supplies. Additionally we provided over six thousand tents from our sea base, of which, over six hundred were constructed by Navy and Marine Corps personnel—again, one of the first forces on the scene.

In summary, based on prior operations, it is clear that naval operating forces provide critical capabilities at critical times. Chief among these always seems to be fresh water, food, medical, shelter, transportation, mobile electric power, command and control, and, in some cases, security. I would note that the majority of these examples I have cited were all from forward-deployed crisis response forces. This was just another mission they were capable of doing. They conducted all of these operations on scene from a sea base without burdening the remaining infrastructure of the host nation. They were able to provide access to remote locations through the normal over-the-shore transportation capabilities that our naval forces possess as well as deep inland areas with our helicopters. We provided that major logistic support and disaster relief without burdening host nation support for transportation or bed-down sites.

I think the key to the success of these humanitarian operations centers on the willingness to coordinate and support vice control the operation. Our measure of success in these operations is relieving the crisis and enabling the various non-governmental and host nations to carry on towards normalcy once we have left. Thank you very much.

Admiral Boyce:

Gentlemen, I am not going to try to sum up our three panelists and myself, as the lectures have been self-explanatory. But I would like to find the key concepts that underpin or characterize the four subjects that we discussed in our panel. Presence, uniqueness, contingency operations, readiness, combined operations, usability, and humanitarian responsiveness: these are the concepts that I would say are the contributions that maritime forces can make towards security.

Questions?

Unidentified Speaker:

Mr. Chairman, I was given the impression that I was going to speak on humanitarian operations by the American Ambassador in Lagos. I would like to make a few remarks on this subject.

My first comment is that we have to recognize and address the issue of an international approach to humanitarian operations. Humanitarian operations after the Cold War have been conducted through ad hoc coalitions from nations seeking common goals in a specific situation, or in response to an immediate crisis. Many disaster relief agencies have worked closely with the maritime forces of Britain under the aegis of the UN and other independent multinational forces. However, it needs to be emphasized that humanitarian operations are conditioned by economic and political considerations. There has been the increasing tendency of States, particularly the developed and powerful States, to commit resources and attention to conflicts affecting their pragmatic interest, and to ignore or give limited support to those that do not substantially affect them. This is what we have noticed in the continent of Africa, whereby larger nations have not responded to crises occurring in the various regions of Africa. This tends to go against the spirit of collective security.

It is abundantly clear that the UN lacks the capacity to respond rapidly to emergent crises; not only in terms of preventative diplomacy but also in terms of timely deployment of adequate numbers of trained and equipped personnel. The present UN rapid response capacity depends on a standby force for this arrangement that has proven to be grossly inadequate for meeting the challenges of contemporary basic support operations. There are ambitious proposals for the creation of a standing UN force, as you all are aware. The signal that is now being sent to African countries is that they will have to shoulder the cost of conflict management on the continent. The various attempts by the Organization of African Unity in this respect have been impaired by persistent financial constraints. The humanitarian initiatives of maritime forces in Africa are also constrained by inadequate sealift capabilities, ad hoc logistic planning, lack of preplanned responses to humanitarian and peace operations, and lack of dedicated trained personnel in humanitarian operations. Having said this, based upon the experience we have had in Sierra Leone, the proposed six thousand person force is deficient without a maritime component, because we envision there might be the requirement for peace enforcement. I thank you very much.

Admiral Boyce:

Thank you very much indeed. I am entirely sympathetic to all of your points. I think the business of selectivity and your observations on selectivity are very valid. I certainly would agree with you. Maybe some other people in the audience would like to interject as well about the UN's rapid response capability and its effectiveness in rapid response.

However, the subject that I asked General Rhodes for his comments on is the business of cooperation between non-government organizations and armed forces in humanitarian endeavor. Certainly the experience that we have had in the United Kingdom in contributing to humanitarian operations is that one spends as much time trying to negotiate with and sort out the NGOs as you do actually trying to help out the people who are in difficulty. Currently we have instituted within our Navy training with NGOs so we can persuade them to come along to improve cooperation on the ground whenever we conduct humanitarian operations. I might say this is not easy because, from the NGOs point of view, the reason they are called NGO is because they do not want to be associated with armed forces. And so you have a dichotomy. But perhaps General John Rhodes will be able to say more.

Lieutenant General Rhodes:

I also take your points to heart. I would say that an international approach, while in construct would be very beneficial, in order to be timely, I think that we have seen that unless you are forward positioned or near the scene, you are not going to be able to really respond in a crisis response. You will be there in a crisis and consequent management perhaps, but not during the immediate crisis response.

Regarding crisis response priorities, I think that you are exactly correct. The dollars drive our response quite frequently. But I would also point out the last two comments that I made in my presentation. Our efforts center on a willingness to coordinate and support vice control, because we understand we must be a team player on this, and the measure of success is how well that nation and the NGOs are able to carry on and return to normalcy once we are gone.

Admiral Matias:

This Seminar or this Symposium is focused on maritime strategies for a Naval Century that is the next century. Of course ships will play a very important role in this strategy. Then the question arises, "What kind of ships?" In fact, this Seminar has discussed this subject as well. We are talking about world security, humanitarian operations, peace support operations, constabulary operations, and the many similar operations. My point is, in the future, for these types of operations, what ship designs will we see? Will the next century's fleets be different and influenced by this type of operations? I would like to have some of your comments.

Admiral Boyce:

Thank you very much indeed, Admiral Matias. I think that I am going to pass this question across to Admiral Van Duyvendijk to perhaps make a comment. Admiral Moreno from Spain and Admiral Lui from Singapore might like to make a comment about the development of ships that have a capacity to help in humanitarian and environmental operations. But first Admiral Van Duyvendijk.

Admiral Duyvendijk:

Thank you. I do not know if your question is limited to new types of ships, or if you want a prospective on the broad range of ships. I think that one of the things we have to be very careful with is that we see national political discussions that will tend to try to say, for instance, that cruisers and destroyers and the like are not necessary anymore, using the rationale that since there is no need for collective defense anymore, we can go to smaller, simpler, and less capable ships. I think that is a very dangerous development, that we have to watch very carefully.

As you know, in the Netherlands we are this very moment in the final stages of drafting a new white paper where we have to deal with an additional budget cut. We have made it quite clear that there are three groupings of main tasks that are all equally important. First, there is collective defense, next there is crisis response that includes conflict prevention, and finally there are civil tasks that include humanitarian aid operations. So it is our opinion is that all three tasks are equally important and that they should strive to build and create assets that are usable in all three areas. That means that when you build a ship that is capable of doing a war-fighting task, on the one hand, and humanitarian aid on the other hand, there is some conflict. But I think we have to watch that very carefully and make sure that when you build a frigate or a destroyer type of ship, it has to fit in and be able to fulfill a war-fighting job as well.

The other facet here is new types of ships that were of less importance in the past have an increasing importance in a new era. Turning to LPD ship types that I think Admiral Boyce was hinting at, let me go back to the Netherlands situation. We recently built our first LPD. The use of this type of ship in the broad spectrum of crisis response operations, as well as humanitarian aid and disaster relief operations, has been proven. For that reason in our new white paper, although not officially accepted yet, we anticipate building a second LPD especially for humanitarian aid and disaster relief operations. However, I think that when you look for an example of collective defense within the NATO context, we need an expeditionary capability. Therefore, I think this type of ship can be used in the whole range of defense, crisis response, and humanitarian aid and disaster relief operations.

Admiral Boyce:

Thank you, Admiral. Admiral Lui, do you want to say anything about *Endurance* or Admiral Rayner about *Galesia* at all, and the utility those ships have? Or has Admiral Van Duyvendijk covered it? Thank you.

Admiral Lui:

Thank you very much for this opportunity. I will not say very much about *Endurance*, the new LST that we are building, but perhaps say a few words about the philosophy of the Singapore Navy in building a balanced navy.

When we talked about building a balanced navy in the 90s, it was actually to build a balanced set of capabilities to meet our war-fighting requirements, which is why we went into MCMs—Mine Counter Measure vessels. We looked at submarines and maritime patrol aircraft. In the twenty-first century, rather than just looking at the horizontal plane of a balanced navy for war-fighting roles, we really need to look along the vertical line that is war fighting and peacetime missions as well. We must

ensure that when we talk about balanced capability that we have the ability to respond to requirements in all three dimensions across the entire spectrum. So I agree very much with what Admiral Van Duyvendijk was saying about a need for our ships to be capable of not just war-fighting roles but also to meet the requirements of peacetime and periods of tension. I may also add that I think it is not just ensuring that the ships are ready and equipped, but that the people are trained. They must have the mindset that they respond not only to what is required during a period of hard war and the purpose for that war-fighting group, but also their role in peacetime operations as well. Training and mindset are especially important in peacetime operations because I think war fighting is more akin to a very blunt instrument whereas the requirements in peacetime may be more akin to that of the skills required by a surgeon—fine skills that must be more suitable for different situations. Thank you.

Admiral Boyce:

Thank you for that. Anybody else want to contribute to Admiral Matias' good question, which has provoked some good thought and discussion? Well, thank you for that good question. Anybody else have any other questions which they would like to ask of the panelists on the subjects they covered or to take issue with the one-word descriptors that I had for each of our subjects? In that case, gentlemen, thank you very much indeed for your attention.

Technology's Impact on Maritime Strategy

Panel Discussion

- *Asymmetric Threats and Weapons Proliferation: Admiral Moreno, Chief of Naval Staff, Spain*
- *New Challenges to Freedom of the Seas: Vice Admiral Mallard, Special Assistant to the Ministry of Defense, French Navy, France*
- *Reducing the Risks: Vice Admiral Simpson-Anderson, Chief of the Navy, South Africa*
- *New Operating Domains: Rear Admiral Mayo, Director, Space and Information Warfare, United States Navy, United States*

Admiral Moreno:

Admiral Johnson, ladies and gentleman, first of all I want to express my satisfaction to be here today and give my thanks to the Naval War College for the invitation to participate in this panel.

The theme is very, very interesting, Technology's Impact on Maritime Strategy. Since mankind first became aware of its existence, technology has been behind much of the military thinking. Yet at the beginning of the Twenty-First Century we still seem to believe that there is ground for a panel on the impact of technology on maritime strategy. Let me introduce this panel with a few remarks on this interesting topic.

History shows that from the beginning, technology was rightfully a consideration in warfare. It was the overriding factor in the evolution of tactics—every new weapon upset the balance in the battlefield and required tactics to use or counter each new technology. But until very recently, differences made by technology were not large enough to dominate strategic thinking.

Nuclear weapons changed that situation to a certain extent, and during the Cold War many strategic debates had a strong technology flavor. Indeed, the grand strategy of NATO was then dominated by the newly acquired technology—the ability to fight a nuclear war. Though circumstances keep changing, the nature of war remains the same. Therefore, nowadays, tactics still deal mainly with how we use our technology to defeat our opponents in the battlefield, while strategy—the art of using all our national resources to achieve our political aims in war—is now influenced by what we can do with our technology. The crisis in Kosovo is a good example. Not only were NATO tactics based on the exploitation of our technology, but also our strategy was founded on our technological ability to inflict damage without receiving any in return.

But technology is a two-edged sword, working in two ways. It helps both us and our opponents. Even though our technological advantage tends to increase, there is no way that we can prevent potential adversaries acquiring weapons that, even if

they are not at the forefront of technology, still have the potential to influence our strategy.

As a submariner I would like to remind you of the often-heard cynical remark that the best aspect of nuclear submarines was the fact that they were so expensive that few countries could afford them. Unfortunately, that sometimes is not the case for weapons of mass destruction. So proliferation has become a major strategic factor we have to live with. The question is how do we adapt to this technology-driven strategic scenario? To me, the question that we must focus on is: "What new technologies and tactics do we need now to be able to continue bolstering our national strategies in this new, more complex scenario?"

I have no doubt that words such as counter-proliferation or anti-ballistic missile defense will dominate the future strategic debate, much as retaliation and mutual assured destruction dominated the past. So let me start with the first presentation—my own presentation on this panel, dealing with asymmetric threats and weapons proliferation. The concept of asymmetry implies lack of symmetry, difference and imbalance between the parts being considered. This imbalance can be seen in several fields: military, technological, social, cultural, economic, et cetera. In some of these fields, development has a positive effect. In other words, the more developed a nation becomes, the more freedom of action it enjoys. In contrast, development in some of the areas has the opposite effect. With greater development, one gets less freedom of action. The higher the level of technology, the more freedom of action; with a greater military power, greater freedom of action. But more cultivated public opinion usually results in less freedom of action. The more advanced a political system becomes, the less freedom of action it tends to allow to its leaders.

Going back to the initial analogy of asymmetry and unbalance, and in order to properly understand the concept of asymmetric threat, we can imagine a pair of scales. On one side of the scales stands State A, highly developed in all fields, enjoying an advanced political system, good technological and cultural levels, and a sound welfare system for its population. On the other side of the scales, State B has a limited degree of social and technological development. The balance tends to tilt towards the side of State A, which would then be able to impose its strategies in order to obtain its objectives by exercising a classical threat when necessary.

The unbalance between A and B represents the asymmetry existing between both countries that is reciprocal. That is to say, B is asymmetric as regards A, and A is asymmetric in relation to B. When State B tries to establish a traditional balance so that State A may not impose its terms at will, it finds itself with no available means to achieve this. The gaps between A and B, especially in the field of technology, tend to widen. So State B will try to find new ways, different from classical military power. It will look for areas where State A is more vulnerable, such as its political and cultural system, its public opinion or its welfare system. An asymmetric threat is therefore developed, that of B over A.

From our point of view, we can, therefore, define an asymmetric threat as that posed by a state or organization over another more organized and developed state, whereby the national interests of this second state become endangered in a way that its military power is not sure to prevail. In asymmetric conflicts, the "center of gravity" is usually an intangible element, and so, military assets have limited use.

The asymmetric threat is not something new. In ancient times, Greek City-States attacked their enemies with harmful smoke and sulphuric gas. Likewise, Chinese soldiers in the Middle Ages also used arsenic gas. In those years, to spread disease among the civilian population was considered as just another weapon of war.

Nowadays, the dichotomy between guns and armor, the offensive weapon and the defense, is no longer relevant, and the weaker contender looks for other ways to strike instead of trying to directly counter the state-of-the-art weapons used by the more powerful state. Since the weaker power is not in a position to reach an adequate technological level, it tries to obtain access to other weapons with which to strike the stronger country. It may not have ample technical expertise, but in a global world such as ours, the necessary technology can easily be procured in the open market. Indeed, although nuclear weapons require a high degree of technology and financing and are therefore far from being generally accessible, other weapons of mass destruction (WMD), such as chemical and biological weapons, are relatively easy to manufacture and considerably cheaper.

The new NATO strategic concept points out that despite the positive advances that have taken place in the strategic environment, the security of the Alliance remains subject to a great variety of military and non-military risks, which are often difficult to assess. Among them, proliferation of nuclear, biological and chemical weapons, as well as their delivery systems, now poses a very serious concern. In spite of the efforts to contain proliferation through diplomatic channels, it remains a direct military threat for developed countries, due to the difficulty involved in detecting and preventing the illegal trade of the materials and technology needed to manufacture WMD. For this reason, international treaties are difficult to implement, even more so when these weapons could be accessible to terrorists or illegal organizations that have already proven their willingness to use them. With this asymmetric threat as a possibility, our navies must reassess their tasks and find new ways to help counteract this threat by adapting both their organization and assets.

Turning now to the impact of technology on the present maritime strategy, which is the aim of this panel: weapons of mass destruction create an instability that transcends national boundaries and achieves a global scale. In this context, it is an understatement to speak about a joint concept. We must speak of a global concept—global in the sense that it requires a multinational approach, leading to combined operations. Global, as well, in that it requires military forces, police and non-governmental organizations. This imposes a strategy based not only on the use of national maritime or joint assets. Regional alliances may suffice in most occasions, while in others a global effort will be required.

It is important that the members of such regional or global alliances face this problem in a homogeneous way. In order to ensure a common doctrine, we may need to define standard procedures for peacetime operations, similar in scope to the rules of engagement we now use in crisis. What is required is some "Standing ROE for Peacetime" that all of us know and can apply smoothly.

It is also necessary to take advantage of technological developments in order to get access to new capabilities that will be required to implement this maritime strategy. Such new capabilities are necessary to confront the problem we are facing now and can be grouped in two large blocks. On the one hand, we must improve the

capabilities necessary to effectively counteract the asymmetric threat. These capabilities include the following:

- Intelligence gathering systems, using space-based assets to obtain an effective web of strategic reconnaissance.
- Improved regional air defense systems, deploying land and naval units capable of countering theater ballistic missiles.
- Improved joint and combined C3I systems, interoperable with those of all members of the regional alliance.

On the other hand, to retain the initiative, we must improve the systems used to protect our forces from the possible effects of WMD. Among them:

- New equipment for the early detection and identification of chemical and biological agents.
- New individual protection equipment, lighter and more efficient, that can be used by crews without decreasing the ability to operate.

The scope of this panel is too large to deal with this subject in a short presentation, but to summarize, I would like to quote the words of Mr. William Cohen, U.S. Secretary of Defense, for I think they wisely summarize the way in which we must confront this problem. "There is no single defense against this threat. Instead, it must be treated like a chronic disease. We constantly must be alert to the first signs and symptoms and be ready and capable of employing a myriad of treatments." Thank you very much.

Now let me introduce the next speaker, Vice Admiral Philip Mallard. Vice Admiral Philip Mallard is a Naval pilot with a twenty-year operational background on Maritime Patrol Aircraft. Furthermore, he has managed to remain in contact with the sharpest commandants, having been Commanding Officer of the frigate *Commandant Boude* and destroyer *Suffren*. In addition to this traditional operational background he has vast experience in strategic affairs and also in logistics support. As a Rear Admiral, he served as Commander, Channel and Northshore Region, and later, as a Vice Admiral, he assumed command of the Naval Action Force. Vice Admiral Mallard will talk to us about new challenges to the freedom of the seas. Vice Admiral Mallard.

Vice Admiral Mallard:

I will make my presentation in French. Thank you very much, Admiral Moreno.

The Law of the Sea Convention of Montego Bay reaffirms the legal basis for the freedom of the seas. It confirmed the freedom of navigation over and under water as well as over-flight and passage rights through most international straits. As you know, this is what was at stake for most nations that depend on the sea for crucial supplies and exports. For a decade, maritime action has drawn closer to coastal areas. There, the environment is more complex, and risks are of a more devious nature. Concurrently technology is constantly evolving. That, on the one hand, permits new strategic approaches; on the other hand, it allows increased threats to be exerted over both naval forces and commercial shipping. More nations and

multinational organizations already are, or soon will be, capable of interfering with the free use of maritime space. Considering our technological evolution, can we change naval strategy to address this issue, or is there something more fundamental at stake today?

Without attempting to be exhaustive, I should like to take up four issues. My first point deals with the so-called "jewel" technologies. In the past, it was the military who led the race. This is not so today. Cost, technological sophistication, or the speed with which civilian programs are renewed, have all picked up where military research left off. Hence, military programs today are geared towards adapting civilian research and industrial developments to their own purposes. The first observation, therefore, is that the major impact of new technologies has been to give access for large and small military programs to advanced civilian technologies. These technologies are widely available in the market. One of the first consequences of this circumstance is that those who know how to adapt to these new conditions will have new technology available faster than others and will be able to build tomorrow's state-of-the-art warfare equipment. Nations lagging behind because they did not rapidly spot enough emerging themes or did not speed up the armament cycles run the risk that what they have available to them is no better than what was available during the last war.

Consequently, it is up to the professionals of the sea to take necessary measures so that our programs and operations are not technology driven, but that strategic thinking anticipates new programs and leads them. It is up to our engineers for perhaps the first time in history to quickly find "off the shelf" technology that will enable us to carry out the programs we need today. Strategists or strategic thinkers can anticipate the application of technology to new equipment under development because the basic technologies are already there in the civilian sector. Is this not the purpose for establishing the U.S. Navy Warfare Development Command?

Obviously, this development is not without hazards. Globalization means that technological progress crosses borders easily. Trade volumes in new markets constantly expand. We have to take this into account in weapons armament policies. Governments control them, and they must resist the temptation to have commercial successes that could lead to uncontrollable threats and allow other potentially hostile states to pass us by. In particular, strategies must consider this in the protection of the C2I networks.

A few years ago the maritime environment was opaque. Each nation was free to operate and other nations did not know what was going on. However, the observation and monitoring of the maritime environment has become more transparent. The use of space, which is accessible to all, is developing and becoming more common. Land or ship-based aircraft and drones operate with monitoring systems installed and engage in maritime operations ever closer to the coastal area. Land-based listening stations provide information that yesterday was only of a tactical nature but is more strategic today. In other words, more and more of the sea is free, but under constant surveillance.

The second area, which I believe is paramount in developing a maritime strategy, is the decisive influence of technology at sea over the land. Here, perhaps for the first time in history, thanks to observation, telecommunication, and information processing technologies, armies and naval forces may know instantly what is

occurring on land. We can monitor movements through satellite and identify the opponent. Naval forces can receive real-time data of multiple movements occurring in enemy territory. Considering the receipt of this information, we can understand the application of the decision-making process Admiral Johnson described yesterday. Naval forces can also strike with great accuracy far inland, using flexible, lethal missiles fully adapted to their mission. Finally, naval forces can project their power not only on a hard-to-control beachhead, but more inland, where such impact is more desired.

Indeed, we are witnessing a general revolution in maritime affairs. This revolution will occur not only in major navies, but also in average-sized navies if they have the determination to secure available technologies from the civilian market. Unfortunately, without being a pessimist, I can also foresee the coming of criminally-oriented multinational organizations. This is one of our major concerns.

The third factor that is also decisive, is the rate at which the acquisition of knowledge, information processing and targeting data are obtained. For example, the complete cycle to target a cruise missile including detection, target analysis and preparation for launch and firing was only about one hundred minutes during the Kosovo operation. Today, this is still state-of-the-art performance. However, this cycle will be commonplace in the future. Of course, this can worry potential targets, including any one of us. Let us not forget that these new technologies are also available on the civilian market.

As we know, not everybody has highly accurate cruise missiles. Admiral Raynor told us that with nuclear warheads, we do not need a high degree of accuracy. Many potential adversaries would not pay attention to collateral damage, as NATO did during the Kosovo operation. This fact is a source of pride for us.

For our naval forces that move at a slow pace, the development of high velocity missiles is a constant worry. Strategy has to adapt to scatter our forces and deny the adversary the use of its weapons through stealth technology and electromagnetic or acoustical silence.

The fourth area which I wish to take up is the question of whether technology has a major influence on strategy; particularly, in our ability to penetrate enemy decision-making networks. Naval forces that remain positioned offshore for a long time have a major role to play in penetrating the computerized network of the enemy and creating disarray in the enemy decision-making process, while enabling us to know the tactics of the enemy. This is a road that many terrorist organizations, unfortunately, are now able to play.

In summary, we see technology propelling the maritime strategy revolution. This is a given. However, I have three additional points that I believe are important. First of all, most of us only have access to a portion of that revolution. True, it is ever easier to get access to new technology through civilian markets, as I said at the outset. However, system integration or new concept development is not an easy task. Human resources, including those of many former maritime powers, are dwindling. These problems will probably prevent us from doing everything possible to effect positive change.

This is the perspective in which we see further development in the use of the sea. The sea offers a unique opportunity for coalition operations; and the least we can

say is that there has not been full cooperation among potential coalition members regarding its use.

Paradoxically, we see that the revolution in military affairs can be more of a challenge for the partners than for the enemies. Partners who have not reached the level of the more advanced members must be assured that they will not be carried beyond their financial capabilities and that they develop military capabilities that meet their national purposes.

The second major observation is that, in the final analysis, military affairs begin and end on land. A state can possess effective weapons systems that project power from the sea; however, you still have to have battalions of soldiers to hold ground. This may create tension within national armed forces and jeopardize the development of technologies valid for sea forces.

My final comment is more of a political nature. It deals with training and organizing coalitions outside the realm of technology. I am referring to the domain of human relations and the fact that consideration must be given to the relative weight of national interests and the weight of history of coalition partners. This is what really is at stake, and where we also have to invest our time and effort.

The global challenge, in the final analysis, is that we should not allow ourselves to become marginalized through lack of interoperability at a time when we see a growth in coalition operations. To maintain stability and peace in the present world is a team effort, a team race. If a leader maintains the pace, sometimes he should look behind to enable the rest of the team to catch up, at least in interoperability. Thank you.

Admiral Moreno:

Merci, Admiral. Now, Admiral Robert Simpson-Anderson. Admiral Robert Simpson-Anderson, Chief of the South African Navy since 1992, is likely one of the world's senior CNOs. As a Junior Officer he served on frigates and cruisers. His impressive operational background includes command of the first strike craft of the South African Navy, and, a few years later, command of the entire strike flotilla. Ashore, he has been Commanding Officer of the Naval Staff College and the Military Academy. Just before assuming his present position, he served as Chief of Naval Support. Admiral Simpson-Anderson will continue this panel by talking about risk reduction. Admiral, the floor is yours.

Vice Admiral Simpson-Anderson:

Admiral Johnson, Admiral Cebrowski, colleagues, ladies and gentlemen. It is once again a great privilege to be part of this gathering at the beautiful and historic War College amongst friends from around the world. Thank you for the invitation to attend the Symposium, Admiral, and to participate in the panel discussion and look at the reduction of risks and technology's impact on maritime strategy.

We live in an age where technology is changing at an exponential rate. Modern telecommunications, courtesy of CNN, allow us to follow laser-guided bombs onto their targets and give us instant reports of battle damage. Cell phones have revolutionized personal communications and are now giving way to mobile offices. Developments in microprocessors allow General Motors to ship more computing power next year, because of the onboard computers in their vehicles, than IBM.

Experiments are being done to connect thought processes via the Internet. The list goes on.

The military is often at the vanguard of leading-edge technology research and application. However, it is not only weapon systems that have become more sophisticated. Ongoing developments in command and control systems allow battle space information to be quite literally online and instantly available to us. The terms "precision strike" and "surgical attack" are current jargon and mean exactly what they say. So, how does the Twenty-First Century navy go about reducing the risks in preparing for naval action in this complex technological environment?

Before I go further, a question that needs to be answered is the following: At what level of warfare does changing technology have its greatest impact? I would argue that it is more important at the operational and tactical level than at the strategic level. The principles of maritime strategy remain largely constant, unaffected by historical, cultural and technological changes. The strategic imperatives behind control of the sea and sea denial, as two examples, are timeless. How these strategies are executed, however, is obviously affected by changing technology. One is reminded of the words of Admiral Mahan in his book *The Influence of Sea Power Upon History*: "Despite great changes and scientific advances in naval weaponry, certain principles of naval strategy remain constant, and nations ignore them at their peril."

Therefore, we are bound to look at the operational and tactical issues of reducing technology-induced risks in the maintenance of maritime strategy. Conventional wisdom dictates that one achieves this by even better technology. The logic dictates that a technological solution can be found, indeed it must be found, for every new threat that arises. However, I would like to propose a shift in emphasis. Is it not possible, for example, that instead of reacting to the pull of technology, we can find other ways of reducing the complexity that technology increasingly introduces at lower cost and lower risk? In this regard, I would like to raise three points. Obviously, there are many more, but I will discuss only three for purposes of the Symposium.

First and classically, navies must remain sufficiently informed by monitoring technological developments so they can respond in a timely manner. Navies must spot the breakthrough advances that threaten to put them out of contention. They must remain equally well informed about the availability of technologies to would-be aggressors that otherwise do not appear threatening. The thrust of the argument is to reduce the element of surprise when faced with a changed technological environment. This is a departure from the cyclical capability escalation that normal technology development allows.

In the past, a development in one field of maritime warfare created a threat countered by development in an opposing field; so, a cycle of threat/counter-threat was generated. An example is the development of the submarine and the conventional developments in anti-submarine warfare. Another example is the ongoing development of electronic countermeasures against missile systems. However, the sheer scope of the scientific escalation makes it impossible for any one navy to adequately deal with all the technological threats generated in this way.

The cost has become exorbitant—especially for smaller navies. Also, the outcome of any new program is never guaranteed. There is often too little return for

the investment made. Obviously, navies must continue to explore technologies as best they can. However, it is no longer feasible to cover all aspects of the technology environment simultaneously. Of course, navies can use the benefits offered by partnerships or alliances. Such bilateral or multilateral agreements can reduce the risks in two ways. First, information concerning potential technology can be shared amongst friendly navies; second, developmental work to counter those states can be allocated to different allies, thus spreading the load.

Second, navies should avoid overly specialized main equipment at the cost of a sufficient force of multi-capability vessels. For most navies, the effort and resources that go into deciding the type and nature of equipment and systems to acquire has increased tremendously. The cost of systems has also escalated. Coupled with this is the question of strategic partnerships and the intense public scrutiny that is inherent in any acquisition process. The net result is that the tempo of the acquisition process has slowed down considerably. The frequency of replacement has also decreased, with main equipment usually required to remain in service longer than planned. Therefore, after years of intense acquisition effort, navies may find themselves having to use specialized equipment in situations that they were not ideally designed for. Sophisticated ships, designed and equipped for blue water operations, could find themselves operating close in-shore and, ironically, being ill-equipped to deal with the unique threats found in the littorals.

For all these reasons, it is proposed that navies consider investing considerably more resources in ships capable of being configured for a variety of functions, but, of necessity, less technologically advanced. This option is increasingly becoming the only practical design option for those navies severely constrained by limited resources, and here I include my own Navy. In essence, this is a quantity versus quality choice that navies have to make. Does one reduce risk by having the latest technology ships capable of meeting any threat but only a limited number of hulls, or less advanced ships designed for a less demanding threat environment but a greater number of hulls? The route that the South African Navy has chosen in its new surface ship acquisition program, for example, is a compromise between these two options. Cost constraints have forced us to choose the quantity over quality option, but with an important caveat: all our ships will have growth potential built into them. Technologically advanced systems can be fitted at a later stage, when the need arises or when finances become available.

Lastly, navies must develop exceptional personnel. People are still the most important factor in warfare. As systems become more complex and varied, intelligent personnel become critical in any decision-making process. Information systems can process billions of pieces of quantitative information. But it is the qualitative input, in the final analysis, that remains the fine line between success or failure. This is as true for officers as it is for rated personnel. Professional people, highly trained, educated, and experienced, will be needed to perform in an operational and tactical environment that changes the norm, and where the unexpected is the expected.

Unfortunately, there is a tendency for modern command and control systems, driven by the ever-present media and the potential for international embarrassment, to centralize decision making in complex situations. This is understandable to a point. Navies want to avoid tactical mistakes that have strategic consequences. However, we need to counter this trend as it interferes with practical, onboard

expertise at sea. Therefore, my suggestion is that we build flexibility and skills into our personnel at every level of training, enabling them to reach exceptional levels of professionalism. In this way, high quality people are able to deal with technology, and, in effect, help counter an opponent's technology with the requisite expertise.

To summarize what I have said, I propose that navies consider three ways of reducing the risks involved in operating in a high technology environment. First, navies must continue to monitor technological developments to keep informed of breakthrough technologies that threaten their existence. As financial constraints prevent most navies from being able to counter the full technology threat spectrum, greater reliance can be put on the shared information and technological resources created by partnerships or alliances. Second, navies should avoid overspecialization in the development of their main equipment and should concentrate on multi-capability ships and equipment, with provisions made for growth potential. This means opting for more hulls at sea at the expense of state of the art equipment. Lastly, the greatest emphasis must lie in developing highly professional people capable of dealing with extreme situations of complexity and variety. Ladies and gentlemen, these are but a few ideas on how risk can be reduced, and hopefully they will provide some input for further debate. I thank you.

Admiral Moreno:

Thank you, Admiral. The last speaker of the panel is Rear Admiral Richard W. Mayo. Admiral Mayo is Director of Space Information Warfare, Command and Control. He is not only a warfare officer with extended operational experience, but also an accredited expert in telecommunications. At sea he served on several cruisers, destroyers and frigates and was later given the command of USS *Nicholas*. Ashore he served in various key positions dealing with command, control and communications. Promoted to flag rank in 1995, he served as Commander, U.S. Naval Forces Korea for two years before coming back to Space Information Warfare, Command and Control Directorate. Admiral Mayo has the final presentation of the panel; he will be discussing new operating domains. The floor is yours, Admiral.

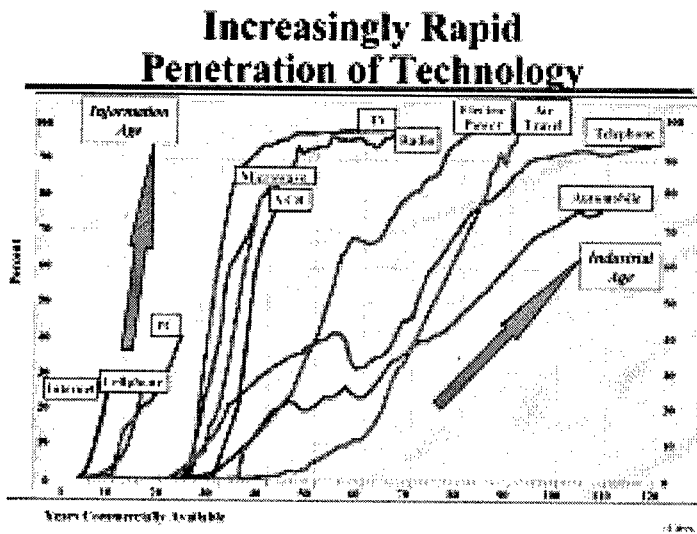
Rear Admiral Mayo:

Good morning, Admiral Johnson, Vice Admiral Cebrowski, ladies and gentlemen. And thank you, Admiral Moreno. I am honored to be here and participate in the panel on Technology's Impact on Maritime Strategy.

I have been asked to speak briefly about new operating domains. Therefore, I am going to attempt to convey what we are beginning to experience in the United States Navy with the linkage among technology, strategy, and the new domain of cyberspace.

First, I would like to mention how quickly this new domain is expanding. Since cyberspace is based on information technologies, and because these technologies are spreading so rapidly, growth is tending to fuel itself. Figure 1 shows information technologies associated with this new cyberspace domain are spreading at a rate more than twice that of technologies associated with industrial development. Appetite around the world for access to information provided by these technologies via cyberspace is phenomenal, although not surprising. Our belief in basic

Figure 1



human freedom is based in large degree on freedom of the exchange of ideas, so this global appetite, as I said, is not surprising.

Furthermore, our belief in free trade parallels this trend. Increasingly, cyberspace is the domain of choice for global business arrangements and financial transaction. The eminent management expert, Peter Drucker, has stated that e-commerce is to the information revolution what the railroad was to the Industrial Revolution. He says that just as the railroad mastered distance continentally, e-commerce is mastering distance globally. I agree. Global economics, already very connected via seaborne trade and air transport, is becoming even more interdependent via cyberspace. Alan Greenspan, Chairman of the United States Federal Reserve Board, states that the remarkable coming together of information technologies has begun to alter, fundamentally, the manner in which we do business and create economic value, often in ways that were not readily foreseeable even a decade ago. This is a profound statement of strategic change.

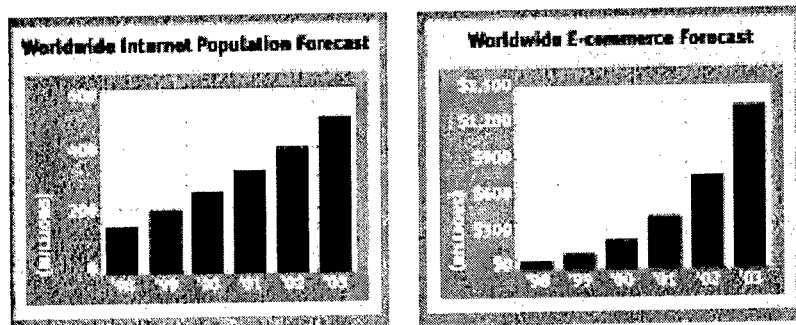
To illustrate this phenomenal shift, Figure 2 contains a sample of statistics and near-term projections showing the Internet's population and its use for electronic commerce. You can see it already is impressive and expected to continue rapidly to develop around the world.

To emphasize the global nature of this phenomenon, Figure 3 shows the amount of Internet host servers around the world. Clearly, this domain of cyberspace is changing the global environment and altering strategic activity.

Space is a physical domain with special importance to the information domain of cyberspace. The networks that define the structure of cyberspace pass through satellites and earth orbit. Emerging mobile satellite systems will provide direct access to cyberspace from locations not equipped with sophisticated local telecommunications networks and are especially useful for highly mobile users like navies at sea. Further, commercial satellites are becoming more capable in delivering remote

Figure 2

Growth of Global Internet Activity

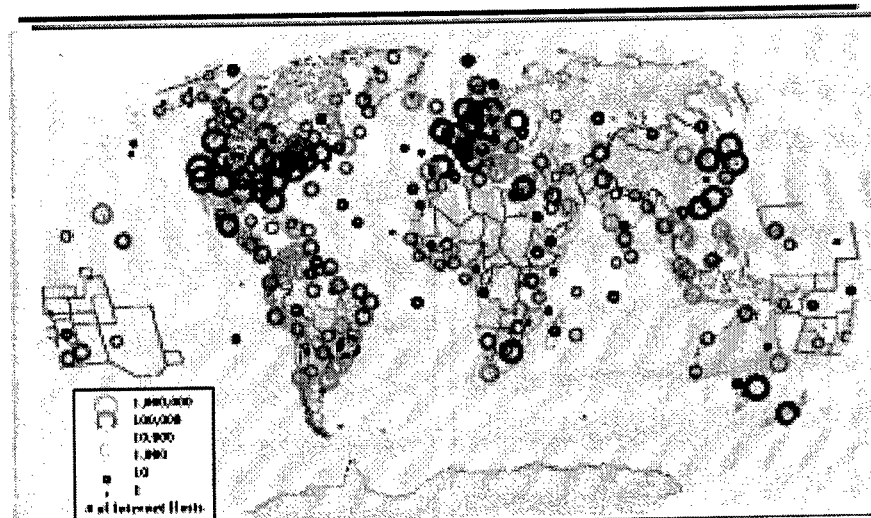


Source: International Data Corp.

100002

Figure 3

Worldwide Internet Hosts



Source: MIDS, Austin, TX

As of Jan 1999

100001

sensing of terrain and collecting vital information about activity on Earth. That is why space is an integral part of the United States Navy's network strategy.

Before I move on to more direct applications to navies, I would like to dig deeper into this cyberspace phenomenon to understand what is really happening to make this new domain useful and attractive at a personal level. Once we understand this personal dimension, we are able to better apply cyberspace to the roles and activities of naval organizations and their people.

Cyberspace turns out to be a very different environment from the communications network of telephones that we are used to. Whereas traditional communication devices typically point one user at a time, cyberspace is an environment where multiple, simultaneous access is the standard. This fundamentally changes the way people operate in the environment. Collaboration is the key behavior in networks like this, and collaboration where distance is conquered means all the navies' intellectual resources can be brought to bear on any issue. This creates an adaptability that was heretofore impossible. First, in recognizing issues and creating innovative solutions. Again, fundamentally broad participation is the key element in this adaptable activity, and the speed at which this happens results in greater operational speed overall. Accuracy is also a key characteristic in the digital transactions taking place in this environment. This results in better operational and tactical precision.

We have identified three key characteristics from this new collaborative behavior in cyberspace that positively impact naval operations. Again, these are adaptability, speed, and precision. The United States Navy is already experiencing these beneficial traits and operations.

Figure 4

Benefits Achieved Via Cyberspace

- Operation DESERT FOX dual CVBG strike ops coordinated almost exclusively over classified Internet Protocol networks
 - Allied Exercise MED SHARK planned entirely via Internet
 - In Operation ALLIED FORCE (Kosovo), classified Internet Protocol network comms replaced traditional U.S. message comms
 - Tomahawk missile targeting and engagement cycle compressed significantly using networks
-

Figure 4 provides some proof of the positive results. You can see that greater adaptability, speed, and precision represented in just these few examples. The most interesting indicator of change is that given the option of doing business the old way, via old communication structures, and doing business the new way, in a highly networked cyberspace environment, our Sailors chose the new way hands down.

We have also discovered new challenges in working this way. The new flow of information is incredible. Our systems and organizations have not kept pace with this environment, but we are not discouraged because we have several excellent avenues towards improving this situation. First, the design of new information management techniques ensures naval forces are participating in an optimal way. Second, there is strong attention to the human-machine interface and the formats in which all this information is shared. Knowledge is the appreciation of all this information by the human operators so that it can be put to good use. It focuses on understanding and sharing across the organization. These issues are not intuitive in hierarchical organizations used to rigid processing and exchanging naval messages, but we are working on them. The implications for overall organizational structure and operating procedures are in tune with the positive behaviors of adaptability, speed, and precision that we are trying to amplify.

Now, back to strategy. In this increasingly connected world characterized by adaptability, speed, and precision, where electronic commerce and communication flow so freely, our navies begin to see themselves in two ways. We are new participants in this new domain of cyberspace, similar to all other participants, and find ourselves leveraging the new environment for competitive advantages across our entire organizations. We are also guardians of this global activity. Nations and their navies, to be engaged in this new age, need unimpeded access to cyberspace for sharing their lifeblood of knowledge.

Therefore, I would like to close with a few cyberspace imperatives for the navies of the world. First, if our navies intend to increase mutual understanding with other potential partners, like humanitarian organizations, and even with potential adversaries, to clarify a crisis, then we need to enhance our access to cyberspace as the key medium for conveying the knowledge upon which that mutual understanding is based. Enhancing our freedom to use cyberspace in this fashion strongly implies that we have a tremendous interest in the global norms of behavior in cyberspace.

Second, because navies routinely operate overseas, they serve as lead elements in guaranteeing overall interoperability with our partners. Working towards improved interoperability is achieved through access to local information exchange procedures, protocols and infrastructures. Especially since the new coin of the cyberspace realm is knowledge, continually experiencing local context in cultures that provide the basis for shared understanding is vital. Naval overseas operations in local activity provide the interoperability experience and knowledge of context. As Admiral Johnson has stated, the U.S. Navy will continue to field an affordable and secure capability to naval partners to permit this networking of knowledge at sea.

Third, the use of cyberspace is closely tied to action in the physical domain. Concurrent local access to both cyberspace and physical domain is vital when the time comes to make a difference at a crisis location or protect global commerce. The

ability of navies to operate relatively freely, together at sea and in cyberspace, gives us an advantage of access via both domains. This unique dual access gives navies tremendous strategic influence in globally interdependent systems and worldwide events.

Naval activity in cyberspace turns out to be not just an imperative to achieve valuable operational effects, although we shall pursue that to great degrees. It also implies a significant role in the strategic health of nations conducting robust international exchange of goods, services, and ideas—a role for which navies have always been designed to accomplish. Thank you.

Admiral Moreno:

To summarize, there are four points of issue that affect technology's impact on maritime strategy. In my presentation, I attempted to highlight the concept of imbalance that represents the asymmetric threats. New strategies must emerge to counteract the new asymmetric threat.

In respect to freedom of the seas, Admiral Mallard told us that technologies are costly in the free market. There is a necessity for weapons control. He also told us of the need for the use of space for surveillance. An important concept is the influence of sea power ashore, an old concept, but still very important. He also considered the influence of sea power ashore with the asymmetric threat that I spoke about. Finally, he emphasized that technology is not the only factor influencing the organization of a coalition.

Thirdly, in the presentation on risk reduction, Admiral Simpson spoke about new technologies and their influence. However, he told us, and I agree with him, the influence of new technology is mainly upon tactics and less upon strategy. He made the point that today maritime strategy is in trouble. I agree with you on that. It is very difficult to stay current with commercial technology. Weapons and counter weapons are almost impossible to afford, especially for a small navy. Therefore, it is necessary to put together a coalition to counter this problem. Another concept that was mentioned is building ships with growth potential, and considering quantity versus quality. Finally, the quality of personnel must be exceptional. I agree with you.

Admiral Mayo presented a very interesting and technical position about new operational domains. He told us about the integration of technology in a global economy and looked at examples of competition and its costs. We are in the Information Age, and we can benefit from cooperation of different countries in an increasingly information-connected war. Navies need access to cyberspace to understand each other and foster international exchange. While this area is very complex, we have been given several ideas to stimulate discussion. Thank you.

Unidentified Speaker:

Admiral Moreno, we have all agreed over the last couple of days how important it is to achieve interoperability using network centric facilities. Admiral Mayo has made very clear our aspirations to make maximum use of cyberspace. Cyberspace, of course, is equally accessible to the malicious. In fact, for every cent the malicious use to create trouble, we will probably have to spend a hundred dollars, or possibly more, to protect ourselves. Would you like to comment, first of all, on the assumption

that if we manage to get enough money to become interoperable in cyberspace, what effort should we be putting into redundancy and what type of redundancy; or, should we spend even more money ensuring systems are safe against interference?

Rear Admiral Mayo:

I would appreciate the opportunity to make some comments. That is a very good question. I addressed two higher-level challenges with the advent of the cyberspace domain. We will have a lot of information to deal with and we also need to share the information across traditionally hierarchical organizations. On a lower level, but no less important, challenges with cyberspace concern training our people because we cannot outsource that function. We have to work with the people we have and keep them trained.

The other big issue I did not address is security. Security is paramount to these networks. I would use the example of Y2K. I believe this is factually correct, the country with the largest Y2K problem was the United States because we have the greatest penetration of computers in our infrastructure. Correspondingly, we had to pay a lot of attention to correcting the problem and making it secure. Because we are, as a country, a Navy, and as a military, a very big user of cyberspace, consequently we do have to pay a lot of attention to security, because an adversary only needs a computer and telephone line. So we spend much time and resources on computer network defense, both as a service and as a military. We try to leverage across the services in our joint domain, within the United States military, to protect our networks. Some of the networks I talked about today are not simply Navy networks, but joint networks. So we pay critical attention to their security. It is a very important issue and will become increasingly so.

Vice Admiral Mallard:

One of our ships was leaving on an operation and did not receive the operations order beforehand. Before arriving in the theater of operations, the ship stopped in a port. One of the crew visited a Cyber Café in that port and found the operation order on the Internet.

Admiral Matias:

Thank you very much for the excellent presentations. Admiral Simpson-Anderson delivered, as usual, an excellent presentation. You addressed one point that I have thought about often. I would like to agree with you, but I cannot. The point concerns small navies like mine; is it better to have more ships, less prepared or less ships, well fitted? This will be an ongoing discussion, and I would like to oppose your argument. If we have more ships well-fitted, then we are spending money wildly in preparing them with requisite space and conditions to fit them in the future with updated equipment. What is the future? When we need to fit the ships, we have to procure and install and train people to use the equipment; this all takes time. By the time we have the ships fitted, the crisis may have passed. This is a concern I have had for some time. I would like to hear comments on my concerns. Thank you.

Unidentified Speaker:

Admiral Matias, that is indeed the case. Once you have the ships fitted, but not with all the growth potential, you may be spending a considerable amount of effort adapting, adding equipment, and preparing them for contingencies that you might not have expected years previously. However, we must all accept that in this day and age, you must design platforms that will last in excess of thirty years, even fifty years. In any case, there will be upgrades during the course of the ship's life. So every ten years or so, as new technologies become available, with new threats, with new opportunities, the ship will have to be upgraded anyway. You will then have to make a decision at the national level, what you can afford and what you will add to the ship. It is indeed a problem. I know this is a common problem for our two Navies. However, I would say it is more of a challenge than a problem.

Admiral Moreno:

Now I give the floor again to Admiral Simpson-Anderson.

Vice Admiral Simpson-Anderson:

Admiral Johnson, Admiral Cebrowski, fellow delegates, colleagues, and friends. Being here for three days, "friends" is a word we certainly can use to great effect. I am neither the oldest admiral nor the most senior admiral who has had the privilege of attending the Fifteenth International Seapower Symposium. However, I believe that I am the veteran amongst us all when it comes to attending these Symposiums, having attended no fewer than four: Numbers Twelve, Thirteen, Fourteen, and Fifteen. Having attended so many, I can say that every time I come here, the Symposium is bigger, better, and more pleasant than the previous. It is, therefore, my privilege, Admiral Johnson, to thank you on behalf of all the delegates present for inviting us to this auspicious biennial event, that has become a red letter entry in the diaries of most of the Chiefs of Navies of the world. You give us the opportunity to discuss issues that give direction to naval and maritime cooperation amongst dozens of the world's maritime forces. Many concepts that had their origins here have been taken home by us for further discussion with our respective staffs and political masters. These have helped us map the future of our respective navies and, also, our acquisition programs.

Moreover, this Symposium, the biggest forum of Chiefs of Naval Operations gathering on a regular basis, gives us the opportunity to meet, become acquainted, and become friends. It has often been said that Navy Chiefs who become friendly do not fight each other. This forum, held at the prestigious Naval War College, certainly plants the seeds for such friendships and cooperation, which undoubtedly will help foster world peace, stability, and rapid reaction maritime contingencies. The topics and issues discussed therefore are of great value. However, the acquaintances and the friendships made are, perhaps, of even greater value. For these reasons, this event is an opportunity one cannot miss.

Admiral Johnson, Admiral Cebrowski, and your staff, I would like, on behalf of all of us, to say thank you for a magnificent Symposium. Thank you for your hospitality, and for giving us this opportunity to enrich ourselves intellectually about matters that are so close to our hearts. Thank you also for a very pleasant social program. I would like particularly to mention last night's wonderful dinner that you

and your lovely wife hosted. We enjoyed it so much. I would also like to use this opportunity to congratulate you, Admiral Cebrowski, and all your staff, for an extremely well planned, organized, and executed Symposium.

On behalf of the ladies, I would also say thank you for a wonderful program. Our pockets are much emptier. I am very pleased to say that the coffers of Boston and Newport are fuller. It is always wonderful that you include the wives and give them the opportunity to be with us, because, sooner or later, we are all going to be retired. Then we will want to talk about things. One of the topics that we will talk about will be these wonderful Symposiums held at the Naval War College, in this beautiful part of the United States of America. Lastly, allow me to wish you, Admiral Johnson, all your officers, and all men and women of the United States Navy the best for a very bright and prosperous future. Thank you very much.

Admiral Cebrowski:

Thank you, Admiral Moreno, Admiral Simpson-Anderson, and the members of your panel.

Globalization in the 21st Century: Building Naval Partnerships

Jerry MacArthur Hultin

*Under Secretary of the Navy
United States Navy*

Admiral Johnson:

At this time I would like to introduce our guest speaker, no stranger to any of us who live in the Pentagon. Let me just say a couple of things. Under Secretary Jerry Hultin has an impressive biography which is in your booklet. I think if I had to characterize his contribution, if you will, as Under Secretary of the Navy, it could carry many facets. But at the top of that list would be this thing called the "Revolution in Business Affairs." That is his charter. That is his passion. That is the difference he is making for the United States Navy. And he is leading us in very exciting directions. I would also mention to you that he is a lawyer. He is a businessman. He has been a practicing attorney. He does many things, all of which are most impressive. But he would tell you, and I will tell you, that the real reason he is a great Under Secretary, and the reason all those other pieces of his life are so successful, is because he started in the United States Navy as a Naval Officer after he graduated from Ohio State. Is that right Jerry? He was a destroyerman by trade back during the Vietnam War, and indeed that in-uniform experience has conveyed a lot of relevance to what he is doing today. I am very proud to call him a friend, as I am proud to work with him in his capacity as the Under Secretary of the Navy. I welcome the Honorable Jerry MacArthur Hultin.

The Honorable Jerry Hultin:

Well, thank you Admiral for that nice introduction. I want to make it clear that the Revolution in Business Affairs only succeeds because we have powerful leaders as teammates, both in Jay Johnson and Don Pilling, and the whole team of you that are here, and also on the Marine Corps side with General Jim Jones, Terry Drake, and the whole team of great Marine Corps generals.

It is a pleasure to be here. It is nice to be back in Newport. It is a little surprising to be what still feels like a young Navy Lieutenant addressing so many Admirals. You know I went through my whole five-year Navy career and never met an Admiral. It is the best promotion I ever got though; Lieutenant to Undersecretary, that is.

Well the last time I was here, it was still summer, and we were up on a weekend. Admiral Pete Long lined up a sailboat, and we went out sailing on the Bay. It was delightful. If you get a chance, Newport is a classy American seatown and I hope

you get a chance to spend some time on the streets and enjoy the beauty of it. It is also interesting to be here today with the wind blowing through the windows. It sounds a little bit like a Vietnam era destroyer at sea in the South China Sea with the wind coming through the doors which never quite locked down tight.

The other interesting thing about being here is the fact that the War College was started at about the turn of the century. Mahan and Teddy Roosevelt were major players in bringing this institution into play. In fact, there is a famous picture of Teddy Roosevelt up on the steps of the granite building on the hill with his staff from about 1897. I think he was the Assistant Secretary at the time. They gathered here in Newport and basically charted a course for the Twentieth Century, and what they developed was a naval century.

I would like now, a hundred years after that meeting, for us to watch those shadows go over the horizon and think about how you have gathered here in Newport again to discuss maritime strategies and to think about this new century.

As you anticipate this dawn of a new millennium, you will begin to see that we may illuminate and define a new era that is at least as powerful a century for naval forces as the Twentieth Century was. The Twentieth was not a shabby century for naval power. This Conference, and the fact that there are so many nations and so many Chiefs of Navy here, caught the attention of Bill Cohen yesterday morning when I briefed him in our morning staff meeting about what was going on in Newport. He was very favorably impressed. The compliment really goes to Jay Johnson and the team of his leaders who put this together. Because of their perseverance to stay in ongoing relationships with you, to know you, to bring something so important to bear that you say: "I'll take time out of my schedule and travel to the United States" is a powerful testimony to what he's led and put on here in these days.

By way of beginning, I would like to make a couple of general observations. First, as good as everything the attendees developed in the past Symposia has been, today we have a historic opportunity to chart a course for the Twenty-First Century that will be dynamic, responsive, and make us as agile and fast-moving as we all believe naval forces must be. I also want to send a second message which is that we will accomplish this goal best if we can work together as partners across this globe. Already today I have heard of more than one agreement that you all have made amongst yourselves—commitments made to join us in key engagements. These agreements are exactly what I hope, and Bill Cohen hopes, and collectively all of us hoped, would take place here. Certainly the theme *Maritime Strategies for the Naval Century* is a perfect topic for all of us to think about.

I want to talk about three things today, and surprisingly none of them are the Revolution in Business Affairs. I want to say though, I have "Business Vision Goals" with me, and for all of you who are in the United States Navy, there will be a test at the end of this lecture about what is in it. If you would like a copy, it is on the web, and we would be glad to have all of you look at it.

Now, down to business. The three things are:

- First Globalization—what should we make of it?
- Second Your role, our role, in shaping the outcome of the future; and
- Third Coalitions and teams—how can we act together better?

Before I discuss these three points, I would like to walk with you back across this last hundred years and have you think about it. We fought, suffered and won World War I and World War II. Many of us sacrificed and bled in Korea and Vietnam where I fought. We squared off in the Cold War—two superpowers and their allies engaged in a conflict that consumed an enormous amount of financial resources and human capital. We locked the world in a deadly nuclear embrace. The Gulf War was won as a coalition. And most recently as part of NATO, many of us teamed together to tame the situation in Kosovo.

But let's consider the lessons of the Twentieth Century also. World War I, where we did not negotiate a sustainable peace. World War II, where we began to understand what a family of nations meant, and secondly where we, as victors, helped those who had suffered the most to rebuild their societies. This was a truly revolutionary mark in the annals of warfare. Then, the fall of the Berlin Wall ten years ago to the day. The end of the Cold War where, I often argue, two fundamental principles—democracy and a market economy—basically brought a centralized monolithic state to its knees. I think we have many reasons to be troubled by the bloodshed of the Twentieth Century, but also many reasons to be proud about the accomplishments. Many of our grandmothers and grandfathers, aunts and uncles, fathers and mothers, brothers and sisters, and many of us, fought and paid much in the Twentieth Century.

But, as I said, as strong as that Twentieth Century was, I would argue we can have a stronger, more significant Twenty-First Century if we set our minds to it. Think of the world we have in front of us: global information, global finance, global trade—think of the challenges. Six billion people; half of the world survives on two dollars a day; a billion in this world survive on one dollar a day. The opportunities for development, for stability, for education, and for freedom are enormous, and as navies, we often will play a key role in setting these forces in motion. So, let us rise to this opportunity, and as we leave the Twentieth Century, set a Twenty-First Century in front of us that will be more powerful than the past. I think this is a challenge and I hope you feel it is an opportunity.

Now let's talk a little bit about globalization. Globalization means a lot of things to different people. You know the basic parameters: free flow of international capital, information, commerce, technology and labor. Yes, even labor in many ways flows in this global economy and at rates never expected before. Almost immediately, you can see that globalization fosters dynamic new inter-relationships between countries. Also, I would say deliciously between people and between companies that are very different. I say "deliciously" because globalization, as you'll see in these remarks, is both sweet and tart at the same time like an apple.

There is good and bad in globalization. Certainly the information revolution means information moves at a far greater rate, imparting a dynamism to the world that we never had before. I think you can argue the end of the Cold War ended a rather static, locked-in-place relationship, and has broken loose enormous creativity and energy that is very important to us. But, interestingly, in these circumstances, we have also created a far different relationship between corporations and nation states. You begin to see corporations relating to nations in ways that are different from how they have related in the past. And you begin to ask the question: "What will be the fundamental roles of nations in the Twenty-First Century?" Many

of the things that nations used to protect are now basically unbounded. Patents and trademarks get very difficult when information flows around the globe the way it does today. Defense becomes perhaps even more important, and, certainly, defense as a way to maintain stability for growth becomes critical. The point of this is to ask you, "What do you make of this change?"

I hope as you pass through these days here in Newport, and after you leave here, on into the remaining weeks of this last year of the Twentieth Century, you will ask: "What do we make of all of this change?" Certainly things are moving at a pace we never expected. Consider the Internet. Everyone here has probably been on the Internet. However, less than five years ago only three million people were on the Internet; today, a hundred and forty million; in five years, one billion will be on the Internet. But even as the Internet continues to make us grow, think about the impact it's having in other ways. Distance clearly means less. For the Internet, rapid means instantaneous. The fast eat the slow, and the world is much, much smaller. Take the Asian economic crisis. Not only did it affect Malaysia and Indonesia, but it went right up the coast to the Pacific Rim; to Korea and Japan and then ricocheted across the globe to Brazil and into the United States—fast, powerful. Listen to these words spoken by the President of Mexico: "Globalization at its worst is a monster force that takes no prisoners."

So globalization can hit fast and it can hurt. I would argue, all things considered, globalization is still a tremendous boon. However, you would have to say globalization is not a system. It is not an economic order of its own. It does not create an environment of growth by itself—only stability and security do that. So as we ride this tide forward, I think we need to think a lot more about how we stabilize and grow the world simultaneously. This question has been one of my primary focuses as Under Secretary, after the business revolution. I think it is going to be important for all countries, large or small, to think hard about the impact of globalization on them. In order to do more about this, we have commissioned the National Defense University to do an eighteen-month study of what I am calling "Naval Concepts in the Globalized Economy." I do not view this as an easy discussion. It does not have a predetermined answer. If you are interested in teaming up with us to make this a truly global enterprise as we look at these issues, you are welcome to become part of what we are doing at the National Defense University. I do not think it will be a walk in the park, but it will be a really engaging time during which we try to figure all of this out.

The second subject I want to pay a little attention to during our time together is the question of "what future are we talking about." One of the problems in grappling with this question is that people often, I believe, imagine a single future and assume that "there it is" and we are just working our way to get there. When we get there, "there it will be." I would propose that this scenario is not reality. There are many futures out there, and what determines which one you get to is often a choice made here that determines this road or that road. So let's think about three scenarios. The first is probably one that comes to mind right away—the optimistic one. The optimistic scenario sees globalization resulting in a benign international arena, peaceful interdependence, maximum economic development and high levels of cooperation. The second scenario goes to the other end of the spectrum—a world in which independent nations, rogue states, terrorists, and individuals

basically take advantage of all the vulnerabilities in globalization—and there are lots of vulnerabilities—and create an unstable world in which war is rampant. Third, there is probably a world in between the two where we try to sustain an equilibrium between these tensions.

It seems, most of all, that we ought to recognize that we can shape this future. We will make the right choices if we team up together and if we learn to cooperate more, to shape one of these scenarios and make it the future. If we stand idly by and cast off all we paid for in the Twentieth Century, we run the risk that the future that unfolds is not ours, and by “ours” I mean all of ours as nations of the world. It should not be the future of those who would subvert development, education, personal wealth, and freedom.

So it seems to me more and more we need to ask how can we work together and shape this world. I would like to focus on one key concern, and there probably are others that you can think of. But my key concern is “interoperability.” We are clearly as a nation committed to an international perspective. But more and more it is clear to us that to act on that perspective we have to have the ability to operate as allies and coalitions, often with people that we have not worked with frequently in the past.

In order to work with allies and coalitions, we need to build new concepts of what it means to serve as coalitions—to team up together—to move rapidly to establish new teams and act when necessary to stabilize the world for growth. You have all had a good opportunity to think about that this week, especially during the Rules of Engagement Seminar War Game that is an important part of this Symposium. Such war gaming builds the cohesion and understanding necessary for coalition building and coalition operations. We begin to understand how one another operate and why one nation might have a problem with another’s policies or practices. This leads to insights such as: “I should adjust somewhat how I’m viewing the problem to accommodate your vision.” That seems to me to be one example of what it will take to move towards greater interoperability.

We are doing some things which I would like to mention with regard to interoperability, and then I would like to talk about ones we could think about. First, in NATO, Wes Clark announced in April the DCI—the Defense Capabilities Initiative. This is an effort to move NATO towards greater interoperability and lay the groundwork for embedding technologies across the board. Secretary Cohen is very conscious of the need for this. Listen to his words from a report on Kosovo. “Not all of the Allies possessed interoperable communications equipment, sometimes leaving us with a lowest common denominator option, communicating targets through channels that were often open to the Serbs. As a result, we may have compromised our effectiveness and unnecessarily risked the lives of our pilots.”

Additionally, Jack Gansler, the Head of Acquisitions for the Defense Department, created a new office—the Director of Interoperability. He also announced that in the future all major acquisitions that we make in the U.S. Defense Department have to have the capacity to interoperate, amongst our own services clearly, but also with our allies and our coalition partners. We are committed to this program. This morning a 6:30 meeting of all the Service Under Secretaries was held. It was the only time we could find free on everyone’s schedule. We were told that we will work on technology transfer and Foreign Military Sales until we get it solved.

We want something that's simpler, faster, and understandable by others and gets the job done. So from 6:30 to 8:00, I worked on that hard. We will work on it hard from here on out. Technology transfer is clearly important. Military sales are clearly important.

What else is important for coalition building? Exercises. We have a full scale exercise schedule. You are often part of these exercises. You also have exercises with each other. To name a few that we have: RIMPAC, GULFEX, UNITAS, Baltic Challenge. These work very well to build understanding between allies, coalition partners and navies. It seems to me that more and more we need these exercises and war games to build cultural interoperability, that is, a common military culture that is based on training and working together. Out of that I think we can get the operational trust and ability to arrive at the fight with the confidence that will make us true partners.

I would say that creating coalitions not only requires innovation and trust, but I think it also contains a fair amount of risk. As you share with partners, you are always at some risk. I think more and more we all will have to commit to take some of that risk because the common enterprise is so important for the Globe. This will not be easy. This will take leadership to make it work. Fortunately, we have seen such leadership in the past, and I think we will see it again in the future.

So with this short list of interoperability ideas, I would ask you again to think about what would you lay on the table? What do you feel is missing? This is a real effort to get a conversation and a discourse going across all the nations and navies. This is not a time, in my view, for the United States to be going it alone. This is a time for us to be deeply committed to each other.

Here we are, at the end of the Cold War, launched into a much more uncertain future. I think the first decade of this post-Cold War era has surprised us with how much more turbulent it has been than expected. It is a world of promise, but it is also a world of danger. It is a world of unanswered questions. Faced with this reality, we need to work hard to deter conflict and maintain global stability for growth. That is an essential feat and one to which the United States is deeply committed.

As I close this talk, let me walk you back again a hundred years. Theodore Roosevelt, after being at the War College, moves on to be President. Listen to his words in 1902: "More and more the increasing interdependence and complexity of international political and economic relations rendered incumbent on all civilized and orderly powers to insist on the proper policing of the world." Although you may say to me, and I would agree, that "policing" rings a little more of the Nineteenth century than the Twenty-First Century, the key thoughts here are "interdependence" and "stability." Certainly, sharing the obligation to foster and maintain stability is amongst us. Interestingly, Teddy Roosevelt lived in a globalized world. It was electricity, telegraph and telephone, not electronics and computers. However, it was a world of globalization, and he helped shape an environment of stability in the Twentieth Century just as you are shaping an environment of stability for the Twenty-First Century.

The question that is posed, I think, is: "How will we do this?" I hope you will help us answer that question. My thought is this. Working together we can meet the challenges of the new millennium. I would hope that future historians would note that

we went forward from this Newport International Seapower Symposium into the Twenty First Century together as partners.

It is an honor to be part of this team. I am honored to be with you. Thank you very much for all you are doing for the whole world. Thank you very much. We have time for one or two questions or comments. It would even be better if you just tell me what you are thinking. However, I would also be glad to answer a question.

Unidentified Speaker:

Q. We have been discussing Global security and so forth. I think it was Admiral Ansibia who this morning said, "Well that's fine, but where's the money going to come from to make sure that nations can do that?" We've had a lot of inter-operability without the need to all be on the same wave length literally. We used "old technology" if I'm allowed to use that expression today. What is your opinion about how you are going to persuade other government defense ministers and other governments to ensure our navies are prepared to meet these challenges by providing budgets that are sufficient to realize our aspirations?

A. Well, as much as you may think a \$300 billion dollar defense budget in the United States is all the money in the world, all of us feel we have the same money problem here at home. I have two or three thoughts on this. One is what we are trying very much to do here, and that is to convey to our nation the linkage, the direct linkage, between Naval forces and stability and economic gain and benefit at home. This is what I call that Main Street America argument. It is necessary because too often it is assumed that we automatically stabilize the world, international trade exists, and the jobs that are created are just there for free; but they are not there for free. They are there because of the role we all play in insuring goods can transit, nations stay at relative peace, and the world grows. So one approach is to make this linkage between what we do as naval forces and the growth of our nations.

The second point is to move beyond the view that the only role of naval forces is the ultimate role in conflict during which we use our navies as a force to conduct actual warfare. While we all need to be ready to do that, it often is our role in deterring conflict, shaping events, and stabilizing, that is far more important and has far more utility.

As I often say, a country in revolution does not buy washing machines or TV's. It does not have workers who make computer chips. It does not have students who go to school. It does not have mothers who raise stable families. A nation which is at relative peace with itself does these things.

We also have another argument in this vein. Navies of the world are not just stabilizing to lock things in place, but stabilizing to grow the world. We have great value, and the most powerful value I think we have is that we are present, often without being intrusive. We are not, as naval forces, inside a country, but near a country. To not be a garrison force is a profoundly different relationship than land forces that must be stationed ashore. More and more it seems to me naval power will be seen as one of the best and more civilized ways to help shape and facilitate the function of global affairs.

A third point, looking at the revolution of business affairs—we must save as much overhead as we can in how we operate and put these savings into our sailor's pay, building ships, and making things work. Do not waste money on unnecessary bureaucrats and those who do not get anything done.

I want to thank you again and thank Jay Johnson for this invitation. It is a pleasure to be here. Enjoy these days. Stay in touch with us, and stay engaged. We will build a great Twenty-First Century together. I am proud to be part of it. Thanks.

Admiral Johnson:

Thank you very much Mr. Secretary.

ISS Rules of Engagement Seminar War Game Intelligence Briefing

Charles H. Breen

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Scenario Brief

Good Morning, I am Chuck Breen, a member of the War College staff working for the Center for Naval Warfare Studies. My brief will provide you with the scenario which will be used as the basis for your seminar discussions. I'll also briefly address the capabilities of the ORANGE and GREEN forces involved in the scenario's dispute and conclude with a summary of the multi-national task force assets which will be available to you as you attempt to enforce United Nations' resolutions in the ORANGE-GREEN dispute.

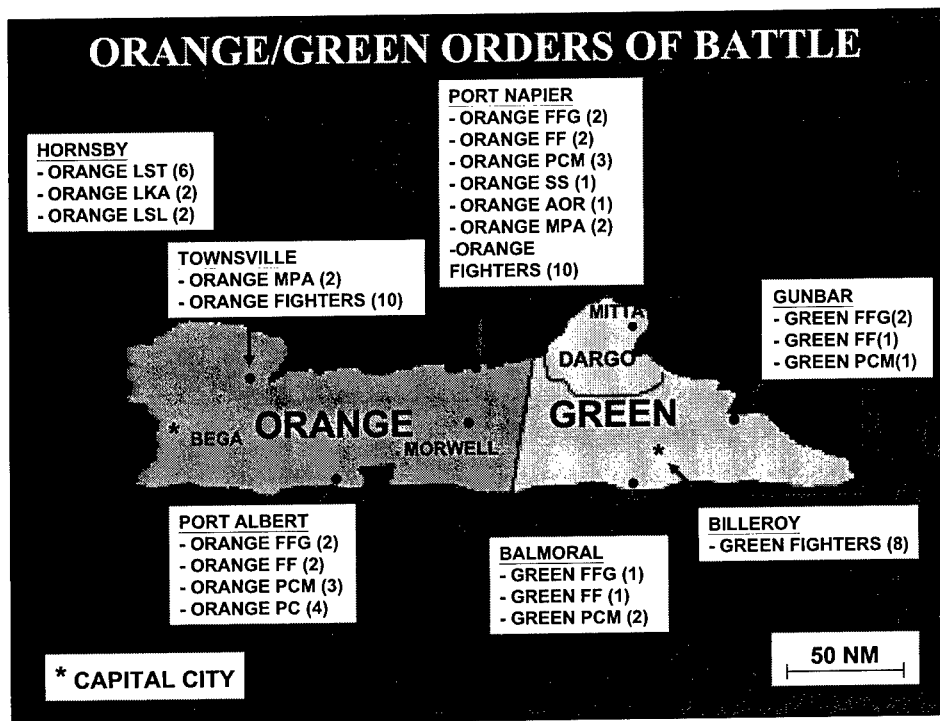
Background

In 1990, a majority of the population of Dargo Province (which is the northern province of GREEN) began to organize politically. This group has strong political and ethnic ties to ORANGE. GREEN believes that ORANGE instigates much of the Dargo Province dissent. This dissident faction, the Democratic Insurgent Group or DIG, has gained widespread support throughout Dargo Province. The dispute between ORANGE and GREEN intensified in 1996 when a multi-national exploratory team found extensive oil and natural gas deposits off the coast of Dargo Province (see Figure 1).

By 1997, the DIG was able to initiate small-scale terrorist and guerilla actions against GREEN forces in Dargo Province. GREEN forces attempted to put down the DIG, but the movement had gained too much momentum. ORANGE supported the DIG movement by providing them with arms, supplies, and technical assistance. By late 1998, the DIG had gained enough strength to upgrade their military actions to small operations against GREEN military forces and were successfully garnering more and more territory in Dargo Province.

On 20 October this year, the DIG captured the provincial capital of Mitta, effectively taking control of all of Dargo Province. DIG leaders immediately established a provisional government claiming to be the rightful government of the eastern half of the island. The DIG also requested ORANGE to directly intervene with military force to overthrow the GREEN Government. ORANGE quickly recognized the DIG provisional government and pledged complete and immediate support to the overthrow of the illegal GREEN Government.

Figure 1. Orange Green Orders of Battle



GREEN and ORANGE have abandoned diplomatic maneuvering. Direct military conflict now appears imminent. GREEN has requested the United Nations Security Council take steps to stop ORANGE's intervention into its domestic affairs. GREEN has declared a state of national emergency and has placed its military forces on alert.

ORANGE has announced publicly that it will provide the DIG with major shipments of arms and supplies. ORANGE's naval and air forces are vastly superior to GREEN's; and GREEN would be hard-pressed to repel any ORANGE operation to resupply Dargo Province by sea. GREEN and ORANGE ground forces, however, appear to be evenly matched. While the United Nations Security Council remains deadlocked on the issue of military intervention on the island of Marlina, a consensus is achieved on the need to reduce the influx of war supplies to Dargo Province.

Accordingly, a resolution was passed under Chapter VII of the UN Charter calling upon all states to immediately implement a general and complete embargo on all deliveries of weapons and military equipment to the Province. In spite of the embargo, weapons continue to flow into Dargo. Citing the failure of sanctions and the threat to international peace and security, a second Chapter VII resolution was passed that "prohibited all maritime shipping of weapons and military equipment into Dargo Province." The resolution further called upon "states, acting individually or through regional agencies or arrangements, to use all necessary means to halt all

maritime shipping enroute to Dargo Province in order to inspect and verify their cargoes and destinations and to ensure strict implementation of the resolution."

A multi-national maritime force has been formed to implement the Security Council's resolutions through maritime interception operations. A joint task force commander and international staff have been selected and assembled. The task force commander has directed his staff to prepare for maritime interdiction operations. Coalition forces are enroute to the Island of Marlina.

In the meantime, ORANGE has declared a Maritime Exclusion Zone off the coast of Marlina. It extends 50 miles from the 12-mile territorial sea. The Maritime Exclusion Zone purports to direct that "no ship or aircraft may enter the territorial sea or the Maritime Exclusion Zone without permission of ORANGE" and that "any ship or aircraft that enters the exclusion zone without permission will be subjected to extreme measures, including use of force." The Maritime Exclusion Zone is routinely patrolled by ORANGE patrol craft and aircraft. To date, GREEN's overmatched naval forces have restricted their operations to short patrols in the approaches to their two naval ports, Gunbar and Balmoral.

Now, we'll take a very brief look at ORANGE and GREEN's forces . . .

Figure 1 depicts the navy and air force orders of battle for both ORANGE and GREEN. ORANGE forces outnumber GREEN about two-to-one in almost every category. Also, ORANGE has maritime patrol aircraft, amphibious ships and a submarine. GREEN has none of these types of platforms. Note that when ORANGE and GREEN both have a given ship or aircraft type, they are basically the same class with similar capabilities.

The specific capabilities and weapons of the ORANGE and GREEN forces are listed in Figure 2.

Figure 2. Orange Threat

- › Surface-to-Surface Missiles on FFG
 - 66NM missile
 - › ASW/OTH-T Helicopters on Surface Ships
 - › Diesel Submarine's ASW/ASUW Capabilities
 - › Surveillance/OTH-T/Air-to-Surface Missile Capabilities of the Maritime Patrol Aircraft
 - 31 NM missile
 - › Fighter Aircraft
-

Now, turning to the Multi-national forces . . .

Figure 3 shows the composition of the Multi-national Task Force available to you to enforce the UN Security Council resolutions in the ORANGE-GREEN dispute.

Figure 3. Multi-national Task Force

ORDER OF BATTLE

- › (1) CV
- › (2) DDG
- › (1) FFG
- › (4) Fast Attack PC
- › (1) SS
- › (1) Combat Support Ship

The specific capabilities of your task force assets are provided in Figure 4.

Figure 4. Task Force Strengths

- › 25 Strike/Air Defense fighters
 - › 7 Surface Search/ASW Aircraft
 - › Surface-to-Air Missile Defense of DDG/FFG
 - › Surface-to-Surface Missiles on Fast Attack Craft
 - 70 NM Missiles
 - › ASW/ASUW Capabilities of Diesel Submarine
 - 70 NM Missiles
-

Rules of Engagement Seminar Summary

Dr. Alberto Coll

*Dean of the Center for Naval Warfare Studies
United States Naval War College*

Thank you, Admiral Heimgartner. Good morning. Admiral Johnson, distinguished delegates, ladies and gentlemen. It will be my pleasure to moderate our panel discussion. I am very honored to be surrounded by such a distinguished group of naval officers, whom I will introduce very briefly: Rear Admiral Graham from Peru; Rear Admiral Lindh from Sweden; Rear Admiral Wilson from New Zealand; Commodore Morton from Australia; Vice Admiral Pasricha from India; Admiral Matias from Portugal; Rear Admiral Delamer from Argentina; Rear Admiral Lui from Singapore; and we are also honored to have join us on the panel Professor Dennis Mandsager, our specialist on operational law here at the Naval War College.

What I would like to do first is to provide some general observations and a summary of the findings from both seminars. That will be followed by short summaries from each of the individual syndicates who have appointed a representative to present their findings to you this morning. We will then have questions and general discussion.

I should emphasize at the outset that it is not easy to summarize what happened in eight very different, highly creative, articulate groups, each of which is composed of officers from all over the world and representing nations with unique national policies, cultures, customs, traditions and languages. Nevertheless, we all will give it a try.

During the seminars a few general observations emerged. They can be summarized as follows:

- National leadership will decide whether or not a nation joins the Coalition and under what terms.
- Once a coalition is formed, the operators can work out most ROE issues.
- Operators must educate national authorities on operational requirements, such as the need to respond to a threat of imminent attack and not to "take the first hit" in some situations.
- There is a place for everyone in a coalition, including those who may respond to hostile intent and those who may not. In spite of various disagreements that will exist among allies and friends in a coalition, there is room for everyone on board. While national laws and policies may prevent a nation from providing combat forces, other contributions can be made, including logistics, medical, and financial support.
- Member nations must be ready to compromise in order to achieve a consensus ROE; however, some national policies cannot be compromised. For example,

the U.S. will not assign its forces to a coalition unless its commanding officers retain the authority and obligation to defend their units against both hostile acts and hostile intent. The domestic laws of certain other nations preclude use of force against hostile intent and otherwise limit those nations' ability to engage in collective self-defense.

- Finally, political context will shape ROE. Past behavior, current relationships, diplomatic exchanges, and the current intelligence and tactical situation all have a bearing on drafting, interpreting, and applying ROE.

We will next look at the draft ROE measures proposed for the Coalition and how the syndicates responded.

Proposed ROE and Syndicate Responses

Self-Defense

The proposed ROE provision in Figure 1 had two goals. It provides that unit commanders have not only the *authority*, but

Figure 1. Unit Self-Defense

- ALL UNIT COMMANDERS IN THE JTF HAVE THE AUTHORITY AND OBLIGATION TO USE ALL NECESSARY MEANS AVAILABLE AND TO TAKE ALL APPROPRIATE ACTION IN SELF-DEFENSE OF THEIR UNIT AND OTHER JTF FORCES.

also the *obligation*, to engage in self-defense. And it provides for collective self-defense, that is, the defense not only of your nation's forces, but also the forces of other members of the Coalition. The proposed measure generated little controversy—except for the underlined phrase: "AND OTHER JTF FORCES."

[Figure 2] Most, if not all, participants could defend their own forces. Most would also prefer that the Coalition operate under a set of ROE that permitted the collective self-defense of all members of the Coalition. However, the domestic laws of some nations do not permit going to the defense of other nations' forces, except perhaps in a declared war or homeland defense situation. Other nations would be permitted to defend the forces of other Coalition members only if they were operating in very close proximity to the forces of the other nations. This domestic law challenge, however, would not—as a general rule—prevent those nations from joining the Coalition. If the JTF Commander was aware of the

Figure 2. Collective Self-Defense

- ALL COULD DEFEND THEIR OWN FORCES.
- MAJORITY WANTED COLLECTIVE SELF-DEFENSE AUTHORITY.
- DOMESTIC LAW OF SOME WOULD NOT ALLOW DEFENSE OF OTHER JTF UNITS.
- OTHERS REQUIRED CLOSE PROXIMITY TO THREATENED UNIT IN ORDER TO DEFEND.
- WORK-AROUNDS ARE POSSIBLE.

collective self-defense limitation, he could utilize and position his forces in such a manner as to minimize the risk to the JTF .

Figure 3. Unit Self-Defense

- ALL COMMANDERS IN THE JTF HAVE THE AUTHORITY AND OBLIGATION TO USE ALL NECESSARY MEANS AVAILABLE AND TO TAKE ALL APPROPRIATE ACTION IN SELF-DEFENSE OF THEIR UNITS AND OTHER JTF FORCES IN RESPONSE TO:
— HOSTILE ACT

Figure 4. Self-Defense-Hostile Act

- SELF-DEFENSE AGAINST 'ATTACK' PREFERRED TO SELF-DEFENSE AGAINST A 'HOSTILE ACT'.
- IMPEDING OR INTERFERING WITH MISSION SHOULD BE ADDRESSED IN MISSION ACCOMPLISHMENT ROE.

Figure 5. Hostile Intent

- ALL COMMANDERS IN THE JTF HAVE THE AUTHORITY AND OBLIGATION TO USE ALL NECESSARY MEANS AVAILABLE AND TO TAKE ALL APPROPRIATE ACTION IN SELF-DEFENSE OF THEIR UNITS AND OTHER JTF FORCES IN RESPONSE TO:
— HOSTILE ACT
— HOSTILE INTENT

Figure 6. Self-Defense-Hostile Intent

- LEGALITY QUESTIONED
- DEFINITIONS AMBIGUOUS
- DEMAND FOR OBJECTIVE FACTORS/INDICATORS
- POLITICAL CONTEXT
- DANGEROUS DELEGATION TO UNIT COMMANDER
- THREAT OF IMMINENT ATTACK MORE ACCEPTABLE TO MANY

[Figure 3] There was a consensus in all groups that all forces have the right to respond to "hostile act" if defined as an attack. However, a significant number of nations had problems with the U.S. use of the term "hostile act."

[Figure 4] A significant number of nations found the U.S. term "hostile act" to be troublesome. Many would prefer that the ROE provide for self-defense against an "attack" rather than the novel U.S. term "hostile act." For example, some felt that a fire control radar lock-on would fall under a dictionary definition of "hostile act." However, under the U.S. definitions, the lock-on most likely would be an indicator of hostile intent; not a hostile act. Although not all nations have access to the NATO ROE, many suggested that the definitions in that document might be more suited to coalition operations than the U.S. definitions.

A significant number of nations were also troubled by including the concept of "impeding or interfering with mission accomplishment" as part of the definition of hostile act and preferred that it be covered in mission accomplishment ROE rather than a part of self-defense ROE.

Again, these issues would not prevent forces from joining a coalition; but they evidence the need for a coalition to adopt common definitions.

Hostile Intent

[Figure 5] The proposed ROE in Figure 5 would allow Coalition forces to respond to hostile intent or the threat of imminent use of force. This led to significant controversy as summarized in Figure 6. These were the issues raised in various syndicates expressing dissatisfaction

with using the concept of "hostile intent" as a basis for exercising self-defense. Some questioned the legality of using force in response to a perceived hostile intent. Many viewed the term as too ambiguous and needing a more precise definition

or an agreed upon list of objective factors that would result in a hostile intent determination. Most noted the need for a complete understanding of the political situation before making a hostile intent determination. Several participants felt the expression "threat of imminent attack" would be more acceptable for Coalition operations. The bottom line is that both operators and national leadership will have to be engaged in order to achieve a Coalition consensus on the hostile intent issue.

[Figure 7] Submarines present a unique challenge in the ROE arena. There was a general consensus that the Orange submarine posed a special threat. Some even viewed it as a threat while sitting at the pier, although no participant expressed a willingness to attack at that point in the scenario. On the other hand, there were a few nations that did not view an underway submarine as a threat absent other indicators of hostility. Most agreed if an Orange submarine was approaching Coalition forces and if there were additional indicators of hostile intent, such as unheeded prior warnings to stay away, hostile intent or threat of imminent attack would be

Figure 7. Hostile Intent-Submarine

- MOST FELT AN UNDERWAY SUBMARINE IS AN UNACCEPTABLE THREAT
- MOST WOULD WARN SUBMARINE NOT TO LEAVE PORT (DEMARCHÉ)
- SIGNIFICANT NUMBER BELIEVED NO PRACTICAL WAY TO APPLY HOSTILE INTENT TO SUBMARINES

presumed, and the submarine could be engaged. Most would prefer a demarche to the nation of Orange to keep its submarines in port. A significant number of nations felt that a separate and more forward-leaning ROE is needed to deal with the submarine threat.

Use of exclusionary or warning zones were discussed as a means to help clarify the tactical situation and overcome the difficulty many nations have with applying the concept of hostile intent [Figure 8]. The legality of such zones was debated in some syndicates; however there was a general consensus that such zones could not be used as "free fire" or "kill" zones permitting indiscriminate firing on vessels or aircraft intruding into the zone. Use of an MEZ as a free-fire zone would be inconsistent with the law of armed conflict and freedom of navigation, and therefore totally unacceptable to many nations. If permitted by Coalition ROE, they would preclude the participation in the Coalition by a significant number of nations.

Figure 8. Hostile Intent- Maritime Exclusion Zone (MEZ)

- SIGNIFICANT NUMBER ADVOCATED USE OF EXCLUSION ZONES TO SIMPLIFY HOSTILE INTENT PROBLEM
- LEGALITY DEBATED
- USE OF MEZ AS 'FREE-FIRE' ZONE UNACCEPTABLE FOR MANY NATIONS AS INCONSISTENT WITH LOAC AND FON PRINCIPLES

Figure 9. Response to Hostile Act

- WHEN A HOSTILE ACT IS IN PROGRESS, THE RIGHT (AUTHORITY AND OBLIGATION) EXISTS TO USE PROPORTIONAL FORCE TO DETER OR NEUTRALIZE THE THREAT, OR, IF NECESSARY, TO DESTROY THE ATTACKER

There was little, if any, opposition to this ROE provision relating to a response to a hostile act [Figure 9]. Some would strengthen the provision by replacing the word "right" by the phrase

Figure 10. Authority to Act in Unit Self-Defense

- UNIT COMMANDER MAY ACT WHEN THAT COMMANDER DETERMINES THE CRITERIA FOR HOSTILE ACT OR HOSTILE INTENT EXISTS, AND
 - THERE IS NO TIME FOR COMMUNICATION WITH SUPERIORS, AND
 - IMMEDIATE DEFENSIVE ACTION IS REQUIRED

Figure 11. Indicators of Hostile Intent

- SHIP/AIRCRAFT IS MISSILE CAPABLE
- FAILS TO RESPOND TO WARNINGS
- EXHIBITS A KNOWN ATTACK PROFILE
- CONSTANT BEARING/DECREASING RANGE
- ILLUMINATES WITH FIRE CONTROL RADAR

"hostile intent" unless a more detailed definition is provided.

No consensus was reached on the ROE provision in Figure 12, which may be unique to U.S. rules of engagement.

Figure 12. Declaring Forces Hostile

- THE JTF COMMANDER IS AUTHORIZED TO DECLARE FORCES HOSTILE
- ONCE A FORCE IS DECLARED HOSTILE, JTF UNITS NEED NOT OBSERVE A HOSTILE ACT OR DEMONSTRATION OF HOSTILE INTENT BEFORE ENGAGING THAT FORCE

would have been useful to allow the Commander to declare as hostile any Orange forces that presented a significant threat to the JTF.

Figure 13. Defense of Neutral Merchant

- MAJORITY WOULD NOT DEFEND
- MINORITY WOULD DEFEND ON HUMANITARIAN GROUNDS
- ALL WOULD RESPOND TO ASSIST SURVIVORS

"authority and obligation" in order to emphasize the commanding officer's duty to defend his unit.

There was a consensus that the ROE provision in Figure 10 was sound in that it permitted use of force only if there was no time to seek guidance from superiors. But again, many would require the elimination of the reference to "hostile intent".

While U.S. ROE generally do not provide detailed guidance on what constitutes "hostile intent," most nations would prefer such guidance. The ROE provision shown in Figure 11 would provide some potential indicators of hostile intent but it is not intended as a checklist for commanding officers. The bottom line appears to be that many nations will be uncomfortable with allowing use of force in response to

Most representatives indicated they would have considerable difficulty gaining approval from their national authorities for this measure. Some noted that this provision would not be needed in the scenario presented due to the superior combat power of Coalition forces. Others noted that if the JTF had been attacked by Orange forces, it

[Figure 13] When faced with a scenario in which a neutral merchant vessel is under attack by Orange aircraft, a majority of nations represented would not go to the defense of the neutral merchant ship unless there was specific ROE authority that permitted it. A few representatives would defend the merchant on humanitarian grounds; and all would provide assistance to survivors in the event of an attack.

Figure 14. Self-Defense Under National Law

- WHAT, IF ANY, PROBLEMS COULD THE COALITION FACE IF UNITS WILL ACT IN ACCORDANCE WITH NATIONAL LAW WHEN EXERCISING THE RIGHT OF SELF-DEFENSE?

Figure 15. ROE Discussion

- HOW IS ROE GUIDANCE PUBLISHED IN YOUR NATION?
- IS IT CLASSIFIED OR UNCLASSIFIED?
- HOW IS TRAINING CONDUCTED?

In responding to the question in Figure 14, most nations recognized that some national policies would not permit nations to join a coalition unless the Coalition ROE provided for the same self-defense measures permitted by national ROE. There was general agreement that, if this figure represented Coalition ROE policy, it would be critical for Coalition partners to share their national self-defense policy so that the Commander would know the capability of each unit and could ensure proper defense of the force.

The questions in Figure 15 were

answered as follows:

- Most nations have ROE; some do not.
- ROE guidance is published in a wide variety of manners and in both classified and unclassified formats.
- A consensus emerged that extensive training and exercises are necessary to ensure that all personnel know and understand the rules. Furthermore, that training should include joint and combined exercises and gaming. And a common ROE manual would facilitate combined training.

We will now move to a review of the proposed ROE for conducting the maritime interception operation.

Maritime Interception Operation-Rules of Engagement

Figure 16. MIO ROE

- CHANGES TO MISSION ACCOMPLISHMENT ROE:
 - A. MAY BE APPROVED BY JTF COMMANDER
 - B. MUST BE APPROVED BY NCA OF COUNTRY PARTICIPATING IN MIO

[Figure 16] The consensus was that appropriate national authorities would have to approve any changes to the ROE. That authority would not be delegated to the JTF Commander. A few delegates noted that if the scenario was a high intensity conflict, additional authority or more flexibility might be provided to the JTF Commander.

Figure 17. MIO ROE

- BOARDING AND INSPECTION PARTIES:
 - A. WILL BE ARMED WITH SMALL ARMS
 - B. WILL NOT BE ARMED

[Figure 17] Most delegates preferred the "small arms" options; but a few nations preferred not to limit the discretion of the JTF Commander or unit commander, and would allow the Commander to arm boarding parties as he deemed necessary.

Figure 18. MIO ROE

- ILLUMINATION OF CONTACTS BY SEARCHLIGHT MAY BE AUTHORIZED BY:
 - A. UNIT COMMANDER
 - B. JTF COMMANDER

Figure 19. MIO ROE

- ILLUMINATION OF CONTACTS BY PYROTECHNICS MAY BE AUTHORIZED BY:
 - A. UNIT COMMANDER
 - B. JTF COMMANDER OR SAG COMMANDER
 - C. HIGHER AUTHORITY WITHIN NATIONAL CHAIN OF COMMAND

Figure 20. MIO ROE

- WARNING SHOTS MAY BE USED AS A SIGNAL TO VESSELS TO STOP AND SUBMIT TO INSPECTION UPON ORDER OF:
 - A. UNIT COMMANDER
 - B. JTF COMMANDER
 - C. HIGHER AUTHORITY WITHIN NATIONAL CHAIN OF COMMAND

Figure 21. MIO ROE

- IF NECESSARY, MINIMUM, NON-LETHAL FORCE MAY BE USED TO CAUSE VESSELS TO STOP AND SUBMIT TO INSPECTION UPON ORDER OF:
 - A. UNIT COMMANDER
 - B. JTF COMMANDER
 - C. HIGHER AUTHORITY WITHIN NATIONAL CHAIN OF COMMAND

Figure 22. MIO ROE

- DISABLING FIRE MAY BE USED IF A VESSEL FAILS TO STOP AND SUBMIT TO INSPECTION. DISABLING FIRE MAY BE AUTHORIZED BY:
 - A. UNIT COMMANDER
 - B. JTF COMMANDER
 - C. HIGHER AUTHORITY WITHIN NATIONAL CHAIN OF COMMAND

[Figure 18] There was a strong consensus that this authority was clearly within the discretion of the unit commanding officer or aircraft commander.

[Figure 19] Most preferred that this authority be held at the JTF or Surface Action Group Commander level. A minority opined that this authority could be delegated by the JTF Commander to the unit commanding officer under certain circumstances, such as lack of communications between the JTF Commander and the unit.

[Figure 20] There was a split among the syndicates on this measure. The majority preferred A or B; but a small minority insisted that this measure be reserved to national authorities.

There was no consensus on the use of non-lethal measures for two reasons:

- Some delegates expressed the opinion that there are inadequate non-lethal force tools available at this time to even consider this a viable option.
- Others were willing to consider non-lethal force; however, the concepts and methods would need further explanation.

[Figure 21] Due to the lack of information on non-lethal measures, most would be uncomfortable to delegate this authority below the JTF Commander level.

[Figure 22] The consensus was that authority to use disabling fire should be reserved to the JTF Commander. A minority would require NCA approval because their national authorities would want to know the flag of the target vessel before approving the use of disabling fire.

Figure 23. MIO ROE

- SPECIAL OPERATIONS FORCES MAY BE EMPLOYED TO CONDUCT MIO BOARDINGS ON:
 - A. VESSELS KNOWN TO BE NON-COOPERATIVE
 - B. VESSELS KNOWN OR SUSPECTED TO BE NON-COOPERATIVE
 - C. ANY VESSEL TO BE BOARDED

Figure 24. MIO ROE

- BOARDING AND INSPECTION PARTIES:
 - A. MAY USE MINIMUM FORCE NECESSARY TO COMPEL COMPLIANCE OF MASTER AND CREW
 - B. MAY USE MINIMUM FORCE NECESSARY TO COMPEL COMPLIANCE OF MASTER AND CREW UPON AUTHORIZATION FROM JTF COMMANDER
 - C. MAY USE FORCE ONLY AFTER AUTHORIZATION BY HIGHER AUTHORITY WITHIN NATIONAL CHAIN OF COMMAND

Figure 25. MIO ROE

- BOARDING AND INSPECTION PARTIES:
 - A. MAY USE RIOT CONTROL AGENTS, (E.G., PEPPER SPRAY, TEAR GAS) IN SELF-DEFENSE
 - B. MAY NOT USE RIOT CONTROL AGENTS (E.G., PEPPER SPRAY, TEAR GAS) IN SELF-DEFENSE

Figure 26. MIO ROE

- IN THE CONDUCT OF MIO, JTF FORCES:
 - A. MAY ENTER THE TERRITORIAL SEA OF GREEN
 - B. MAY ENTER THE TERRITORIAL SEA OF ORANGE

Figure 27. MIO ROE

- ORANGE FORCES INTERFERING WITH JTF FORCES IN THE CONDUCT OF MIO:
 - A. MAY BE CONSIDERED HOSTILE AND ENGAGED BY ANY JTF UNIT
 - B. MAY BE ENGAGED UPON ORDER OF JTF COMMANDER
 - C. MAY BE ENGAGED ONLY AFTER AUTHORIZATION BY HIGHER AUTHORITY WITHIN NATIONAL CHAIN OF COMMAND

[Figure 23] The consensus was that special operations boardings should be limited to non-cooperative vessels or in situations where an opposed boarding was expected. A minority would require national authority approval before exercising this option. Several indicated that they did not view this as an ROE issue and would give the option to use Special Operations Forces to the JTF Commander as needed.

[Figure 24] There was a consensus that boarding parties should have the authority to use minimum force to compel compliance of the master and crew. This was viewed as a tactical decision of the on-scene commander. There was a consensus that the term "minimum force" must be defined. In particular, it is necessary to determine whether or not "minimum force" includes deadly force.

[Figure 25] Most delegates preferred that the JTF be allowed to use RCAs. Some nations noted that their domestic law would prohibit use of RCAs by their forces; but it was noted that even if other Coalition partners used RCAs, they would still be permitted to join the Coalition and participate in the MIO.

[Figure 26] Most delegates agreed they would seek and receive consent of Green to enter Green territorial seas. Many expressed concern that entry into Orange territorial sea could escalate the conflict. Most delegates questioned whether they could get the authority from their national authorities to enter the Orange's territorial sea without compelling circumstances. Others believed that the language contained within the UN Security Council Resolution authorized MIO forces to enter Orange and Green territorial seas to

conduct MIO.

[Figure 27] Most thought that the term "interfering" would need more definition. With a clear definition, the authority could be delegated to the JTF

Figure 28. Conclusions

- THE KEY IS FLEXIBILITY AND COMPROMISE
- THERE IS A NEED FOR COMMON UNCLASSIFIED ROE RELEASABLE TO PROSPECTIVE COALITION MEMBERS FOR EXERCISES AND WAR GAMES, AND EVENTUALLY REAL WORLD OPERATIONS

Commander. Even with a clearer definition, a minority would require NCA approval.

[Figure 28] In conclusion, as you can see, there are considerable differences in national views on ROE. Nevertheless, most of these differences can be resolved, or at least ameliorated significantly, by operational Com-

manders who are willing to be flexible and to compromise whenever possible.

The development of an unclassified ROE for coalition operations that could be used in exercises and war games would be a major step forward in achieving necessary compromises and an understanding of each other's ROE policies and the rationales behind such policies. This unclassified ROE could provide a menu of possible ROE provisions. In the event of real world operations, the unclassified and previously tested document could serve as a starting point for the development of a classified ROE set for that particular coalition operation. Here at the Naval War College we intend to explore the development and refinement of this type of coalition ROE document.

This concludes my summary, and I would like now for each of our syndicate representatives to share with you some of the insights gained by their particular groups. Thank you.

Seminar War Game Panel

Dr. Alberto Coll

*Dean of the Center for Naval Warfare Studies,
United States Naval War College, Moderator*

Rear Admiral Graham:

The first conclusion for ROE seminar group one is that 100% agreement between all Coalition members on rules of engagement is unlikely. Specifying different roles for some countries will be necessary. Anyway, even with different roles, each nation can make a positive contribution to a coalition effort. Everyone has a job.

Two—the two most difficult ROE areas are: one—defining and acting upon hostile intent; two—collective self-defense in peacetime operations. The inability to address these challenges could prevent some otherwise willing countries from participating.

Three—although the establishment of exclusion zones may simplify the problem of identifying hostile platforms, doing so runs counter to freedom of navigation principles and could create fractures in a coalition.

Four—it may be useful to have a set of standard rules available from which coalition negotiations may begin. There should be a menu of ROE options for various operations. It should be unclassified for war games and exercises. Actual rules selected for a real war operation could be classified.

Five—military leaders have an obligation to educate civilian leaders about how differences in national Rules of Engagement can increase the challenges for forces operating in a coalition. Also, rules of engagement application is greatly enhanced when intelligence is properly shared, and the mission statement should be as precise in language as possible—especially when limited objectives are desired.

The final conclusion—no matter how well you have written down your rules of engagement, all that work will be useless unless you are deeply committed to extensive training. Thank you.

Dr. Coll:

Thank you very much Rear Admiral Graham. I now would like to introduce Rear Admiral Lynn from Sweden.

Rear Admiral Lynn:

I wouldn't say that I come with very much new here. Much of what I'm going to be saying has been covered already. But prior to any operation, national or coalition, rules of engagement must be thoroughly considered and decided upon on at the

political, theater and unit levels. ROE should include rules establishing the level that different action decisions are to be taken.

It is not necessary to have exactly the same rules of engagement for every unit in an operation. Differences due to nationality or other reasons are not necessarily show stoppers. It is essential however that commanders are aware of the differences.

Point two—it's often difficult or impossible to be distinctly precise in rules of engagement terminology. There are many uncertainties. What is self defense? What is a hostile act? What is hostile intent? These are good questions to which there is no single answer. In the end, you have to rely on the good judgment of commanders on all levels.

Point three—a hostile act against mission accomplishment is a very uncertain term. In Group Two we came to the conclusion that there may well be acts considered to be hostile to mission accomplishment that are not necessarily sufficient justification for a military response.

Point four—precise terms and knowledge about international law and treaties is increasingly important. We see better and better reasons to have not only war fighters but also lawyers at the front line of action - not to make decisions of course but to give advice to Commanders.

Point six—what is the difference between a naval quarantine and MIO? In practice we found that very hard to tell. What is contraband? What constitutes "other military equipment?" How is a computer categorized? In Group Two we all agreed upon the necessity of a well defined mission statement. Without a clear mission statement, what is mission accomplishment?

Point seven—in an interception operation, how do you take action against ships that do not respond to your instructions? There is evidently a very broad scale of answers. What is non-lethal force? How do you use force against a tanker that does not respond to MIO forces requests? What is most important: to stop that tanker or to avoid a major oil spill? Warning shots might be ineffective and rules of engagement must provide stronger measures. Warning shots followed by nothing are probably a signal you do not want to send to your opponents. What do you do with a disabled ship? Have you got the means to tow it away? Can you sink it? Can you leave it drifting? What do you do with the crew? There are no computer answers. The good judgment of commanders will play a key role.

Point eight—make your ROE known to your opponent in order to make your intentions clear and to reduce the chance of misunderstanding.

Finally point nine—in the Orange/Green scenario, the Coalition should encourage active participation by all Coalition members, including operations in territorial waters and diversion of interdicted shipping. Thank you.

Dr. Coll:

Thank you Admiral Lynn. I would like to introduce now Rear Admiral Wilson from New Zealand.

Rear Admiral Wilson:

Thank you. Admiral Johnson, good morning sir. We've had a very extensive and well conducted summary provided. So I'll just limit my remarks to some of the highlights that were raised in our syndicate.

First, I think the discussion highlighted that ROEs cannot be superior to national law. The challenge is to work with the inherent limitations of national law, not attempt to circumvent it. While compromise might be achievable on some points, one must not expect national law to be compromised. This was a particularly important point raised on the issue of proximity. There was some thought that there may need to be a specific definition of what proximity actually means in terms of distance.

There was certainly a lack of consensus on the issue of how to deal with the Orange submarine, and there was discussion going beyond the scenario of evolving weapons systems that might well pose a problem similar to the submarine as future technology matures. One example being the belligerent use of non eye-safe lasers.

On the concept of maritime exclusionary zones, there was a proposal that perhaps you could declare some form of operation zone where you would advertise that you were conducting operations within a defined area and the safety of any aircraft or vessel that came within that zone could not be guaranteed. The thought was that the lawyers might well encourage you to use that tactic in order to legitimize any miscalculation that is made by Coalition forces.

There was significant benefit seen in producing a pre-prepared ROE—the idea being to define quite clearly what we can do now and wait for the Coalition to negotiate what we can't do. This would have the advantage of a decrease in the response time of the coalition to the crisis. The idea advanced was that this should begin at the regional level where nations share common interests, geography and a shared understanding. This would be the small step to be taken first.

Finally on the issue of classified or unclassified ROE, there is obviously a dilemma regarding this point. If you publish clearly all your ROE, your opponents have an understanding of what response you're going to take. It's predictable, but it also leaves open the issue of advanced notice of escalation. The opponents against publishing ROE position was that they are perhaps the most important orders that commanders have, and to publish them would violate a key principle of war and that is protection of your own security. Also, it was felt by opponents that by publishing them it would invite trial by CNN. Thank you.

Dr. Coll:

Thank you Admiral Wilson. I would like to introduce now Commodore Morton from Australia.

Commodore Morton:

Good day. Nice to be here today. Thank you for having us, sir. You've already heard some summaries, and I don't want to repeat what has already been said because there is a large measure of similarity in the things that our Group discussed. But one or two things might be added to the debate.

On the issue of it's our job to educate our national authorities on the complexities of this kind of operation and coalitions and indeed rules of engagement - the thought was put forward that we spend a lot of time ourselves war gaming and considering ROE and even planning. But we have great difficulty in attracting our political masters to participate, and prepare beforehand. We must encourage them

to be involved in seminars such as this so we can explain to them from our own national perspective what they might be getting into in terms of coalition operations.

There is a political-military dimension to everything we do in regards to rules of engagement. On that point also, the issue of the over-arching national policy of whether the coalition policy was to maintain status quo, escalate or even deescalate would affect the interpretation of some of the ROE. We didn't get into a deep discussion on that, but it was mentioned as being an important consideration.

This also applies to the ROE definitions and how you interpret the definitions of hostile intent and hostile act. We certainly agreed very strongly that maybe "attack" and "threat of attack" were clearer than "hostile act" and "hostile intent" to many nations, and also to our political masters in the context of understanding in coalition operations.

There is also the issue of ensuring that whatever rules are passed down and implemented at the tactical level, they are clear and unambiguous so that the man on the ground, maybe even the member of the boarding party, knows exactly where he stands and what he has to do—that he is not left without the understanding or options he needs to carry out his duties. Our people who are in the frontline need to be quite clear on what's going on. Thank you.

Dr. Coll:

Thank you Commodore Morton. Vice Admiral Pasricha from India.

Vice Admiral Pasricha:

Admiral Johnson, gentleman. Dr. Coll has covered most of the points that were discussed in our syndicate, so I will restrict myself to only three issues which I think generated a lot of discussion when we had our syndicate meeting. On the first one there was consensus. And on the other two there was considerable debate, and I'm afraid there was absolutely no consensus. The first issue related to the entry of the coalition force into territorial waters of other countries. Of course the UN mandate in the War Game Scenario said all prohibited cargo going to Dargo Province must be stopped. The consensus was that if this was to be done in the territorial waters of other nations, the UN mandate should be changed to expressly include the entry into territorial waters. Absent this UN mandate to enter, the Coalition force should not enter into other nation's territorial waters.

The second issue was a discussion, and I think the point has been raised by practically each and every spokesman for the syndicates, of whether the ROE should be applicable to all forces in the Coalition. We have little doubt that each nation or each navy would go by its national rules first. But there are a couple of issues that need to be looked at concerning common coalition ROE. The first of these related to the geographic location of the nation. Each nation is a part of a number of economic and military coalitions and alliances that are very close. Those alliances can vary from a mere local alliance, regional alliance or even an international alliance. Therefore, many decisions that a nation takes would depend entirely on some of these alliances.

Also the location of the area of dispute was very important. For example a nation close to the Middle East or the Far East would hesitate to take action under the rules of engagement against a neighbor for fear of reprisal after the present conflict is

over. But they would have no hesitation at all of perhaps going into the Caribbean and taking much stronger action because of awareness of the fact that nothing would happen to that country thereafter.

The other factor that emerges is the location of this hypothetical island. We have no idea as it now stands whether there are twenty-five neighbors around it at a hundred miles, and whether it is in an area of heavy maritime traffic. For example, if this island was located somewhere close to the Malacca Straits, the rules of engagement would be very different than if this island was located in the South Pacific and all by itself. So its location and aspects related to proximity to other nations and maritime traffic would play a very important role in what rules of engagement a nation would find acceptable.

To bring about standing coalition ROE would be very difficult because in the discussions there were three different scenarios that were projected. Looking at all these scenarios by themselves, it was difficult to correlate one with the other. Rules of engagement for one scenario would not quite work for another scenario. Here we had a practical example in front of us, but it was still not possible to determine what the rules of engagement should be.

Some felt that, because military action would be the last resort, it would be possible during the period political and diplomatic negotiations were going on, to establish standing rules of engagement for the Coalition. However, there was no consensus on this point because there was also the view that if the Coalition waited until that late stage to start looking at standing rules of engagement, it may perhaps be too late to come up with answers in the timeframe available.

However, it was felt that the two important factors contributing to the success of a coalition: communication and interoperability must be given high priority. Under all circumstances and all conditions, these two must always be there. The ROE development process can expand communications channels, networking, interoperability and interaction among the coalition navies.

Ultimately, the rules of engagement, whether they be standing or ad hoc, will be based on the geographic location of the Coalition members, the location of the Coalition operations and various other aspects of affecting the Coalition member nations relations with other nations.

Finally, there was an additional point which did not have consensus, and that was the choice of what nation would provide the Coalition leader. There were differing views on whether the leader should be from a country that has a direct interest in the issue for which the Coalition is being formed to deal with or should the leader be from a totally unconcerned country. One of the views expressed was that it was like having one's son serve in his command. Is this right or wrong? Similarly, in spite of being the best surgeon in the world, a doctor would hesitate to operate on his wife for fear of his actions being adversely affected by his personal involvement. Therefore, in any coalition it is important that the leader of the coalition be someone from a nation that does not appear to have a direct involvement or interest in that particular conflict. It is not merely that the leader of the CJTF would be in a position to make the right or the wrong decisions, but public opinion might question the logic on which he based the decision. And even if he did make the right decision, the interests of his country may give the impression that his decision was not right, but was tailored by what was required of his country. Thank you very much.

Dr. Coll:

Thank you Admiral Pasricha. Joining us now is Admiral Matias from Portugal.

Admiral Matias:

At Seminar Six, we had good discussions oriented by an excellent moderator. Consensus was not always achieved a fact that stresses the sensitivity of ROE in a coalition. Of course, I think with more time more agreements would have been reached. We prepared a long list of comments, but Dr. Coll's presentation covered most of them in a very precise and concise way. Therefore, I will limit my remarks to very few points.

First, I think we felt the need in the group for more precision and detail in the ROE. For example, the ROE should include a list of hostile intent indicators—that is the ROE should be more extensively explained with more background and rationale. They are too dry – needing some more meat to be more understandable.

Another point that I will pick from our long list is that the grant of political authority from the United Nations is essential and should give CJTF authority to make decisions that affect the coalition force safety and mission accomplishment.

Another good point of discussion was the implementation of safety or security zones to protect the force. Some found it a good idea to extend the zone past mere weapons range. Others found it was a bad idea. Those taking this position felt that if we consider the Maritime Exclusion Zone established by Orange to be an illegal act, the coalition should not implement a safe haven. But others considered that the Coalition is working under a United Nations umbrella giving us greater authority than we would have otherwise. This is a good issue that deserves further consideration.

We felt the mission statement should be widely publicized—especially to Orange. Potential weapons carriers must be informed of the Coalition's mission through a notice to mariners or through CNN. We need to put pressure on Orange as a factor in achieving our mission.

One final brief point, we found that there was interest in international standing rules of engagement to be prepared under United Nations guidance. This could be a shopping list, not necessarily mandatory for every case, but a prepared shopping list that people can think about. They could tune or arrange or modify the list as necessary to fit the occasion. It would serve as an initial planning document.

Finally I would like to congratulate Dr. Coll for such a well organized planned and executed seminar. Knowing Dr. Coll for the past eleven years, I have to confess that he is even brighter than he was eleven years ago. Sometimes age makes people better like Port wine.

Dr. Coll:

Admiral Matias, you're very, very gracious and very, very kind. I want to say to all of you that it's given me a great deal of pleasure today to be moderating this panel and to have on this panel both Admiral Matias and Admiral Delamer both of whom I knew at the War College ten years ago when they were students here. It's a wonderful pleasure and just a wonderful reminder of these friendships that all of us can form through these gatherings. So thank you for your kind words sir. And now Admiral Delamer from Argentina will be sharing his insights with us.

Admiral Delamer:

Admiral Johnson, Admiral Cebrowski, thank you very much for your invitation. Professor Alberto Coll, it is really an honor to participate with you on this panel. You were my professor ten years ago. I would like to also thank the Syndicate Seven members, who thought that I could reflect their thoughts and ideas during these two last days. Being number seven is good. It's easy because almost everything has been said. I won't repeat many of the common issues that already have been addressed. I will just go through the main points that we covered during our seminar war game.

We believe that the CJTF should not have the authority to declare forces hostile in this scenario at this point as was proposed initially. This is due to the Coalition's relative strength, training and the political difficulty in getting national command authorities to agree to delegate this authority to the CJTF.

All agreed that national command authority consent will be required prior to defending other national forces. Although that authority would probably be given in advance, if that was not the case, that nation's ship or unit would be assigned to a lower threat area or mission.

A very important issue came out in our seminar about hostile acts and hostile intent. There was a strong sense that the concept of hostile act is much more objective than hostile intent, which is more subjective. Hostile intent is more a question of intentions and perceptions. Also we should take into consideration that technology today works in a way that it is not very easy to know or to define if some act is hostile intent. For example—you can shoot a missile sixty miles from one ship - sixty miles with almost no radar emission. So we think that this concept is losing relevance and it will lose more relevance in the near future. However, we recognized it still has some meaning for old systems, but not for the new ones that are going to come out. Therefore, a comprehensive list of all indicators of hostile intent could probably never be developed. That is the main thought from our seminar.

Another key issue that came out during the two days of our seminar was how to decide when we should go up and down the chain of command from the unit level to the CJTF command and then to higher authority for decisions. We believe that the CJTF is at the scene of action so he knows much better than anyone higher in the chain of command what's going on.

The other point that we discussed was how much power would be enough to give to the CJTF for mission accomplishment. We generally agreed that the Coalition should have a common ROE framework to work efficiently and that all participating nations in the Coalition should have enough confidence in the designated CJTF to allow him to act with enough freedom of action. Of course, there will be some members that will participate in the Coalition with some specific ROE that could restrict or limit their actions. This should be clearly stated beforehand so this unit again would be assigned to a lower threat mission or area. Thank you very much.

Dr. Coll:

Thank you very much Admiral Delamer. And now our colleague from Singapore, Admiral Lui will join us.

Admiral Lui:

Thank you very much. I just wanted to say at the outset that I was volunteered because the ROE in Seminar Eight did not permit me to decline. As a recent graduate of the War College, I want to give my thanks to Professor Coll and all the moderators and also to let you know that the impact and influence that you have over us as former students extends well beyond that one year we have in the War College. If we have come back as better naval officers and people, it is thanks in part to the sterling work that all of you do here in this College.

I just want to say that many of the points that were brought up in Seminar Eight have already been raised. But I want to perhaps reemphasize a couple of points.

First off, I would like to comment on the point that was made by Admiral Pasricha. He comes from a large country with a large navy. I come from a very small country with a very small navy. But I just want to emphasize also that the geographical context of this operation is very important. Being small can make one acutely aware that the degree of permissivity and the application of ROE is very highly dependent on the geography of it all. We would perhaps be a lot more liberal if this is taking place in the Caribbean or the South Atlantic versus somewhere in Asia. I think that is a consideration that we have to bear in mind when we bring a coalition together.

A second point is that there is a slight difference between being prescriptive and being descriptive, and both of them are equally important in the ROE. Let me explain. I think being prescriptive is telling you what you can or what you cannot do - comprehensively and clearly spelling it out. For example, making it clear what you would not allow a unit commander or a CJTF to do in order to give him operational flexibility to do what has not been spelled out. We don't want to tie the hands of the commander, but at the same time we want to also very clearly set up what are the "OB", or the out of bound markers for those of you who play golf, and we want to make sure that those are not transgressed. Because you have both aggressive as well as conservative commanders coming from all parts of the world with different backgrounds and training, the rules will have to take these differences in personality into consideration. The prescriptive part of the rules must spell out clearly and comprehensively what he cannot do, or what he can do.

The other portion of the ROE is equally important. It is the descriptive portion, and we need to also pay a lot of attention to this portion as well. I think the descriptive portion of the ROE provides the operational guidance and objectives. It spells out the overall policies and goals. It gives general direction regarding the situation and the application of ROE - whether it is to be deescalatory, non-escalatory or perhaps even allowing the forces to take a more aggressive posture. The Coalition forces as well as national authorities will have to come together and spell out this direction in order that the forces on the ground are able to act in accordance with the intended purpose of the Coalition.

Thank you very much again for this opportunity to be here for this Symposium. It is my first and hopefully not my last. It certainly has been very beneficial and enriching. Thank you.

Dr. Coll:

Admiral Lui, thank you very much. And thank you for your kind words about the Naval War College. I would like to turn now to all of you and ask if there are any questions, comments that you would like raise for discussion? Yes please?

Unidentified Speaker:

I will come with two points. First: in my view, retaining national ROE instead of a common coalition ROE may mean that the potential of the Joint Task Force may be less than the sum of the individual potentials of the union, and that makes a great difference. My second point is that I think that maintaining national ROE is a sign of national sovereignty. It means that if I want to achieve a common goal, maybe I have to face the problem nowadays facing many countries that enter international organizations - it means giving up voluntarily some elements of sovereignty. The problem we have to face is: are we willing to give up that sovereignty, or do we want to keep our sovereignty in the full spectrum? This is a problem that some European nations now entering the European Union are facing. As they join they EU, they volunteer to give up some sovereignty. This is the first point.

The second point—relates to a point made by the previous panel discussion. I will now go back to Cyber Café. Nowadays we can envision a situation in which what's going on during the crisis as it develops is known by the multinational authority who is following in real time exactly every step and problem of the crisis. This raises the question of how do you feel as a Commander Joint Task Force if the multinational authority is interfering with your mission telling you exactly what to do and what not to do, regardless of the ROE established? I recall, in a quite different framework, that during the Cuban missile crisis the President of the United States called directly to the commanding officer of a destroyer that was following Russian merchant ships carrying missiles to Cuba. Okay? Did he feel happy? Thank you.

Dr. Coll:

Thank you very much. Any comments from the panel? Any of the panel members would like to comment? Any comments in response from the audience? Okay, next question please or comment.

Admiral Madison:

Admiral Madison, Canada. I'd like to pick up a point that Admiral Lynn raised in his remarks. Since we have done a number of embargo operations in the past and are currently doing one or two around the world, the issue was with respect to fuel tankers and mission accomplishment. Did your syndicate actually come to some sort of conclusion as to whether or not mission accomplishment still prevailed considering the risk of what I would call collateral damage environmentally if in fact you used disabling fire against a fuel tanker. And perhaps Professor Mandsager from a legal perspective would like to comment on that vis a' vis the International law of the sea.

Rear Admiral Lindh:

No, we didn't come to any precise conclusion. But we were of the opinion that every commander, especially the CJTF, has to be aware of the overall goal of the operation. Maybe it's better to let one tanker slip through than to have a major oil spill catastrophe. That answer could never be given unless you are very well aware of the total scenario, et cetera. But we did agree that there are occasions when it's better to let a contrabander slip through than to create a major natural catastrophe or an environmental catastrophe or to escalate the situation to a very high point. Some examples that we were discussing were: does the United States in the Gulf have exactly the same Rules of Engagement and treat, for instance, an intruder from Iraq, the same way they treat someone from Iran? That is not necessarily so from what I understand.

Dr. Coll:

Professor Mandsager?

Professor Mandsager:

We have a number of individuals present who have recently participated in the Arabian Gulf MIO Operations, including legal advisors and commanders. I certainly would invite them to comment on the question. But a direct response is that we always factor potential environmental damage into the collateral damage equation. And it presents a very difficult issue in some cases. In this case in our syndicate, I believe our consensus was that oil was not necessarily a part of the embargo, but that issue would have to be clarified if there was any ambiguity as to what was contraband and what was not contraband. But certainly it presents a difficult case. It presents a difficult issue in the Gulf. We have conducted numerous conferences dealing with the issue of environmental damage, and, as I stated earlier, it is always factored in the collateral damage equation.

Dr. Coll:

Yes Admiral, please.

Admiral Moore:

On the question of environmental issues, I would just make the comment that in the Gulf presently, the impact of our decisions on the environment is issue one. In the recent past, we have had three instances where vessels that had been detained for violations of the UN sanctions, have been released because the vessels subsequently posed an environmental hazard to the Gulf. All of these vessels were vessels that developed major leaks and appeared to represent a real hazard to sink or to spill their contents in the Gulf. Very quickly, in consultation with our chain of command, we decided to let those vessels go. We think this is an appropriate course of action given the circumstances of the ongoing operation in the Gulf.

On the question of mission accomplishment, in our syndicate with Rear Admiral Lynn, I raised this issue in regards to a comparison between Iraqi interlopers or Iranian interlopers. Clearly, in the Gulf today we would hesitate before we would take any action against an Iranian vessel that might pose some interference to the operation. Based on our larger concern of maintaining peace and stability in the

Gulf, that's issue one. We would not be interested at all in having some circumstance develop that would in any way threaten our current good situation with Iran. On the other hand, if an Iraqi patrol boat came out into the Gulf and interfered with the ongoing maritime interception operations, in my view, we would undoubtedly take some fairly aggressive action. So we drew that distinction between those two.

Dr. Coll:

Thank you Admiral Moore. Other questions or comments that you may wish to raise at this point?

Admiral Weaver:

Admiral Weaver, USN. It seems to me that in the scenario that was provided to us, there are a number of artificialities as there will be in any type of hypothetical situation. But it strikes me as common to any potential future coalition confrontations or coalition situations that communication and connectivity continues to be, or will, be the underlying connector of all contacts and of all situations. Although throughout the Symposium it's been emphasized several times, I would just observe that as we think in terms of future potential coalition operations, we need to talk about how well connected we are when faced with situations like ours because the turning radius, the reaction radius of our coalition command and control operation, is highly dependent on our ability to rapidly respond to a challenge on very short notice. And I would not so much ask a question but make an observation about the potential this has for our mutual investments in connectivity and command and control with a view towards coalition operations.

Dr. Coll:

Thank you. Questions? Comments from the audience? Any of the issues that were raised here. Any comments from our distinguished panel members in closing? Yes sir, Admiral Lynn.

Admiral Lynn:

Quite a number of times I have asked superior officers to me: "What do I do if?" And, a very common answer has been that this is the reason why we have commanders and not computers at sea.

Dr. Coll:

Professor Mandsager.

Professor Mandsager:

A quick comment in response to some comments heard in the syndicates that United States Rules of Engagement tend to be too aggressive, in particular with regard to our giving the commanding officers authority to respond to hostile intent. As you all know, we often require our personnel to serve in harm's way. And we have tremendous trust and confidence in those officers selected for command at sea. In my view, our history is that our commanding officers have a superb history of exercising appropriate discretion in the application of force. And while we always try to

provide as much guidance on the hostile intent issue to our commanders as is feasible, the bottom line is it's always going to be that on-scene commander who will make the difficult decision. Our history and our experience have served us well, and I'm confident that the hostile intent equation will remain a part of United States ROE for the future. Thank you.

Dr. Coll:

I would like to thank each of our syndicate representatives for the great skill and clarity with which they distilled the results of their discussions. And I think that the seminar discussions that took place over the last two days in themselves justified the value of this conference. I'm very pleased at the range of the issues that were addressed. And I'm very pleased that a number of disagreements and difficulties came to the surface. Indeed, this is the kind of stuff that we will need to work through and on in the months and years ahead. But it is very gratifying to see that we could focus on a wide range of issues and address with great candor, with depth, and with a great deal of thoughtfulness both our differences and also the agreements that we do have in common. It's been a great pleasure, and I thank all of you for making these discussions as fruitful as indeed they have been.

Closing Remarks

Admiral Jay L. Johnson, USN
Chief of Naval Operations

Vice Admiral Alex Tal (Commander in Chief, Israel Navy):

Admiral Johnson, admirals and dear friends, over three decades ago, in January, 1968, on a voyage from the port of Portsmouth to Haifa, the Israeli submarine INEZ DECARA disappeared into the depths of the sea. DECARA was a D class submarine, one of the three that we purchased from the British Navy and refitted before her departure. The last contact with the submarine was in the Central Mediterranean, not far from the Isle of Crete. After several days of searching, with support from allied Navies, INEZ DECARA was declared missing. About a year later on a sandy beach, the submarine's rescue buoy was found. That was the only sign that she ever sent us from the mystery surrounding the DECARA's disappearance. Since then many search operations have taken place in the waters of the Mediterranean, but all led to a dead end.

During the last four years, thanks to the support of Admiral Boorda and Admiral Johnson, a cooperative effort was established between the U.S. Navy and Israeli Navy that proved fruitful. On the 28th of May 1999, at a depth of 2,900 meters, the INEZ DECARA was located. With the mystery surrounding the location of the DECARA lifted, the final resting place of the sixty-nine crew members is finally known.

Just a few days ago on the 2nd of November 1999, we held a memorial service for the DECARA sailors with hundreds of family members and brothers in arms present. I would like to express my gratitude to the U.S. Navy for the dedication and help that was extended to the Israeli Navy. We all belong to the Navy family, and only we can fully understand and appreciate the mutual willingness to help one another.

I am going to retire on the 2nd of January next year. After thirty-five years in service and four years as CNO, the finding of INEZ DECARA is one of the cornerstones in the history of the Israeli Navy. I am proud to be a member of this unique club and in our Navy family. I would like to thank Vice Admiral Cebrowski for giving me this stage for five minutes to express my feelings and my thanks to the U.S. Navy. I would like to present to you, Admiral Johnson, as a souvenir, a model of our submarine DECARA. As you say today Admiral, relations which are based on trust, confidence and mutual understanding must be hallmarks for all our relations. Thank you.

Admiral Johnson:

Acknowledgment of Presentation

Thank you very much Alex for your words, for this remembrance of a tragic event that has now been brought to closure, and the reminder that this business of going to sea in ships and submarines is a dangerous one. We are not like other people. We serve, willing to give our lives everyday. That makes us different. And I am proud to be part of that brotherhood, sisterhood team. I would also like to say that I am proud of my friend Vice Admiral Alex Tal for the leadership he has given the Israeli Navy. I commend you for that Alex. I thank you for your friendship, and I wish you God speed in your next career. Again, thank you.

Closing Remarks

Just a few words to wrap up. Admiral Cebrowski, I want to say a couple of words of thanks on behalf of all of us. First, to Art Cebrowski, Rear Admiral Pete Long, the provost to the Naval War College, and to Dr. Alberto Coll, whose work was manifest here today. Thank you all for the hospitality, certainly, but more importantly for giving us the intellectual rigor and the fresh approach that we have experienced here in the last two and a half days. I feel very good about what has happened. I think most of the delegates would agree with me. We owe it to you, and we thank you very much.

Second, you have seen a couple of gentlemen a lot here in the last couple of days. I want to recognize them. They are seated down in the front. I will ask them to stand. First, is Rear Admiral Ken Heimgardner. Sorry Ken, you have to stand and stay there. And the good-looking guy right next to him is Captain Karl Soderholm. The two of them did a lot in their own right, but they also represent literally hundreds of escort officers, action officers, drivers, coordinators, planners, officers, enlisted personnel—active duty and reserve—the full spectrum. I dare say that they have been working the better part of a year to make this happen the way it did. My measure of success is to be able to say to you that they really made it look easy. With all the moving parts that were underneath all of this, I know, and all of you know, that it was not easy. So I commend you for a job extremely well done and ask you to pass that to everyone who had a hand in this. Congratulations.

As to the substance of our last two and a half days, I do feel good about what happened here. I liked the discussion this morning. We took a chance with the seminars. I am glad we did. It is food for thought for the next round, but I think it is also indicative of a couple of things. The panel discussions, the seminars, all of it, showed among other things that we do not always reach consensus. We have different perspectives—many different views and opinions and experiences, but the truth of it is that we have an environment here where that is just fine, and everybody has the opportunity to present their own perspective. That is a huge, huge strength. When I think of the International Sea Power Symposia, this one in particular, the last one in the Twentieth Century as Admiral Fujita reminded me last night, it reminds me it does not really matter whether you come from a big navy or from a small navy or from an old navy or from a new navy. Here, everybody's voice

counts. That to me is the enduring strength of this Symposium, I feel very good about that, and I think you should too. It is the power behind my discussions of the relevance of naval forces. As we look into this Twenty-First Century and, as you heard me say last night, I do believe militarily that we—you and I—and our naval forces, including Navy, Marine Corps, Coast Guard—these maritime forces provide the best right answer for our countries in the Twenty-First Century.

What we have done here, and what you will continue to do when you go home, and what we will do when we reconvene in two years is to keep that initiative going; to keep telling our story, to keep sharing the relevance of what we do. We can only get better because of that. I am proud to have been associated with this Symposium. I am grateful for your cooperation, your attendance, as I said last night, and most of all I am grateful for the friendship. Have a good trip home. Do not forget what we have talked about, share it with everybody you can. We will look forward to another one in two years. Thank you very much.



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ISS XV
SCHEDULE OF EVENTS
"MARITIME STRATEGIES FOR A NAVAL CENTURY"

Monday, 8 November 1999

0830 Orientation
0840 Administrative remarks: RADM Ken Heimgartner
0845 ISS Convenes. Welcoming remarks by VADM Arthur K. Cebrowski, President, Naval War College
0900 Keynote address: "Maritime Strategies for a Naval Century," ADM Jay Johnson, Chief of Naval Operations
1000 Break
1015 Address: "Coalition Operations," VADM Charles W. Moore, Jr., Commander, U.S. Naval Forces, Central Command/Commander, Fifth Fleet
1100 Seminar introduction by VADM Cebrowski and Dr. Alberto Coll, Naval War College
1130 ISS Group Photo, Colbert Plaza
1200 Luncheon for Delegates at Officers' Club.
1330 Personal/Admin time
1400 Seminar War Game, rooms as assigned.
1630 Seminars adjourn for the day

Tuesday, 9 November 1999

0815 Delegates arrive NWC, Spruance Hall.
0830 Administrative remarks: RADM Ken Heimgartner
0835 Address: "Global Maritime Security: A Coast Guard Vision," by ADM James M. Loy, Commandant, U.S. Coast Guard.
0920 Break
0930 Panel Discussion #1: "Naval Role in Economic Security."
Freedom of Navigation: ADM Ellis, USN
Environmental Protection: VADM Jaureguy, Peru
Economic Development and Maritime Resources: ADM Matias, Portugal
Enforcement of International Law: RADM Riutta, USCG
1030 Break
1045 Panel Discussion #2: "Maritime Forces' Unique Contribution to World Security."
Peacetime Presence: ADM Boyce, UK
Contingency Response: VADM Shackleton, Australia

Combined Operations: VADM Van Duyvendijk, Netherlands
Humanitarian Operations: LtGen Rhodes, USMC
1200 Luncheon address by The Honorable Jerry M. Hultin, Under Secretary of the Navy.
1330 Personal/Admin time
1400 Reconvene Seminar War Game, rooms as assigned.
1630 Seminars adjourn for the day.

Wednesday, 10 November 1999

0815 Delegates arrive at NWC, Spruance Hall.
Uniform: Service Dress Blue or Civilian traveling attire.
0830 Admin remarks. RADM Heimgartner
0835 Panel Discussion #3: "Technology's Impact on Maritime Strategy"
Asymmetric Threats and Weapons
Proliferation: ADM Moreno, Spain
New Challenges to Freedom of the Seas: VADM Mallard, France
Reducing the Risks: VADM Simpson-Anderson, South Africa
New Operating Domains: RADM Mayo, USN
0945 Break
1000 Seminar War Game Panel Moderator:
Dr. Coll
1—RADM Graham (Peru)
2—RADM Lindh (Sweden)
3—RADM Wilson (New Zealand)
4—COMO Morton (Australia)
5—VADM Pasricha (India)
6—ADM Matias (Portugal)
7—RADM Delamer (Argentina)
8—RADM Lui (Singapore)
1145 Closing remarks by ADM Jay Johnson
1200 International Seapower Symposium XV adjourns